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COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR FLEET OPERATORS

AUGUST 1948

Compare NEW DODGE "Job-Rated" TRUCKS feature for feature!

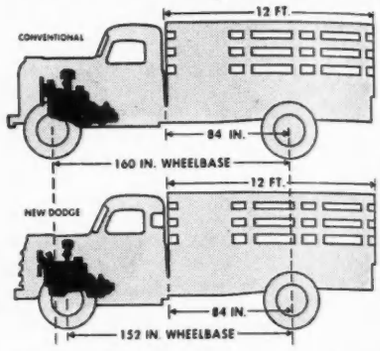
Read this 10 Point Comparison

(Dodge Model F-152; 14,500 pounds Gross Vehicle Weight—and Comparable Competitive Models.)

FEATURES AND ADVANTAGES	DODGE "Job-Rated" TRUCK	TRUCK "A"	TRUCK "B"	TRUCK "C"	TRUCK "D"
Wheelbase	152 in.	161 in.	158 in.	159 in.	161 in.
Cab-to-Axle—to take 12-foot body	84 in.	84 in.	84.06 in.	84 in.	84 in.
Wide-Tread Front Axles (shorter turning—more stability)	62 in.	56 in.	60.03 in.	58⅜ in.	56 in.
Modern "Cross-Type" Steering	Yes	No	No	No	No
Turning Diameter * —Left —Right	50½ ft. 50½ ft.	61½ ft. 61½ ft.	60½ ft. 54½ ft.	54½ ft. 54½ ft.	66½ ft. 66½ ft.
Maximum Horsepower	109	93	100	93	100
Total Spring Length (Front and Rear "Cushioned Ride") †	194 in.	171⅛ in.	162 in.	176 in.	182 in.
Cab Seat Width (Measure of Roominess) ‡	57¼ in.	52¼ in.	51½ in.	47½ in.	52¼ in.
Windshield Glass Area ▲	901 sq. in.	713 sq. in.	638 sq. in.	545 sq. in.	713 sq. in.
Vent Wings plus Rear Quarter Windows	Yes	No	No	No	No

* To outside of tire (curb clearance.) Computed from data based on tests or computations obtained from usually reliable sources. † All four springs. ‡ Measured from production models. ▲ Computed from width and depth measurements; no allowance for contours.

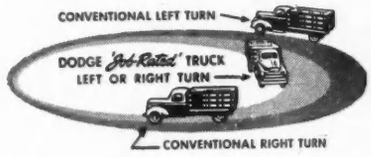
Better Weight Distribution Easier Handling Shorter Turning Diameters



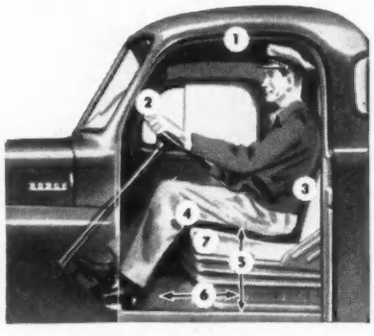
Front axles have been moved back, engines forward, placing more load on the front axle. While cab-to-axle dimensions are the same, wheelbases are shorter, giving better weight distribution, and increased payload.

This new weight distribution, combined with longer springs, produces a marvelous new "cushioned-ride."

You get still more comfort from new "Air-O-Ride" seats, with their easily controllable "cushion of air."



You can turn in much smaller circles, both right and left—you can back up to loading platforms or maneuver in crowded areas with greater ease—because of new type "cross-steering," shorter wheelbases, and wide tread front axles. In all, 248 different *"Job-Rated"* chassis and body models. Up to 23,000 lbs. G.V.W. Up to 40,000 lbs. G.T.W.



1—PLENTY OF HEADROOM.
2—STEERING WHEEL . . . right in the driver's lap.
3—NATURAL BACK SUPPORT . . . adjustable for maximum comfort.
4—PROPER LEG SUPPORT . . . under the knees where you need it.
5—CHAIR-HEIGHT SEATS . . . just like you have at home.
6—7-INCH SEAT ADJUSTMENT . . . with safe, convenient hand control.
7—"AIR-O-RIDE" CUSHIONS . . . adjustable to weight of driver and road conditions.

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

Reg. U. S. Pat. Off. Published monthly Member C.C.A.
Acceptance under the Act of June 5, 1934, authorized December 18, 1934

Vol. LXXV Philadelphia, August, 1948 No. 6

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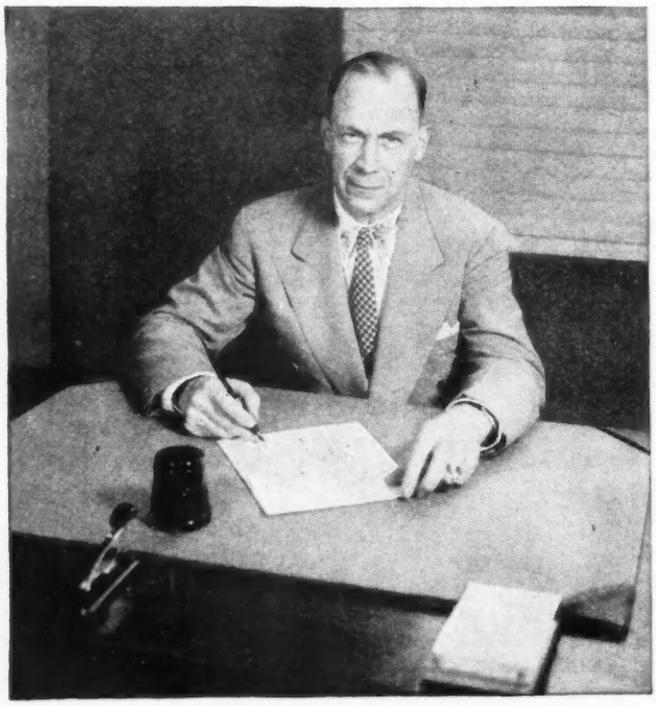
SUBSCRIPTION RATES: United States and United States Possessions and all Latin-American countries—$5.00 per year. Canada and Foreign—$10.00 per year. Single copies—50 cents. April issue, $1.00.

Owned and Published by
CHILTON COMPANY (INC.)

Executive Offices
Chestnut and 56th Streets, Philadelphia 39, Pa., U.S.A.

You can reduce your

Nationally known highway-hauler points the way to lower truck protection costs



Bill Merritt, Director of Safety and Personnel for Trucking, Inc., studies drivers' safety record charts. A continuous and vigorous campaign for safer vehicles and drivers has resulted in June, 1948 being the lowest accident-rate month in Bill's memory. It is obvious that safety education has a direct bearing on Trucking, Inc's. reduced insurance premiums.

←"Nice going, Bud," officer tells driver who has just finished his safe vehicle test. In his new Reo, driver finds such Reo standard equipment as dual-primary (or full air) brakes, excellent over-the-hood vision, wide, easy-access doors and a relaxing, high-riding seat. All aid safe driving.

Bill Merritt, Director of Safety and Personnel for Trucking, Inc., large interstate haulers, believes in the A.T.A. slogan—*Safety is No Accident.*

Bill not only preaches such slogans to his drivers, but sees that the drivers get every chance to put them into practice.

Here's how Trucking, Inc., got a *25% reduction in their insurance rates* in the face of *rising* premium costs for all businesses everywhere.

Last year, Trucking, Inc., encouraged its drivers to enter such skill and ability-measuring contests as the A.T.A. sponsored State and National Truck Roadeos.

This safe and sensible attitude paid off—two drivers taking first place honors in the Michigan State Roadeo, and another winning a top award in the Indiana State contest.

Such ability and progressiveness on the part of these and other Trucking, Inc., drivers, plus unusual safety measures, were recognized by their insurance company and *rates were subsequently reduced 25%.*

But well-informed trucking companies generally agree that safe and sensible drivers are only part of the story of getting truck insurance rates reduced.

The truck itself comes in for its share of responsibility, too. You must have a truck that has every possible driving advantage in your favor.

Examine the Reo line of trucks, for instance. Reo's More-Load design, that gives users a shorter wheelbase for easier maneuverability, helps play a big part in safe driving.

With a shorter wheelbase, Reo trucks are easier to handle on curves, hills, and in heavy traffic.

With shorter wheelbase Reo trucks, everyday operations, such as backing, parking, jockeying, steering and just plain highway driving, become safer and simpler to perform.

And the beauty of shorter wheelbase on Reo trucks is increased by the fact that they still carry a full payload. It's just done in a more compact unit.

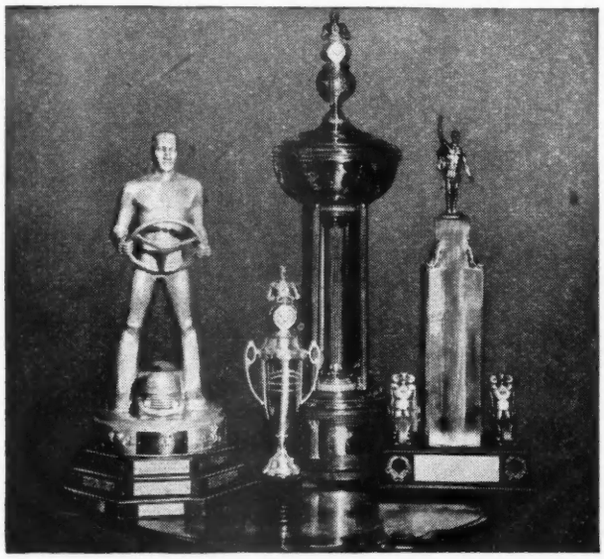
★ ★ ★

truck insurance rates, too!

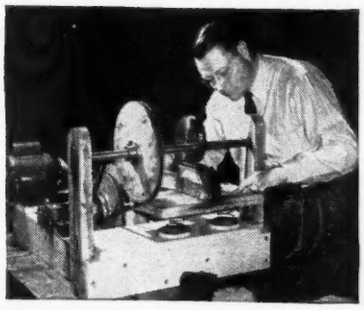
Most intelligent fleet owners will also agree that the heart of a truck—its engine—must be kept in good condition to operate safely.

Granted that repair and maintenance costs are higher than they've ever been, they are obviously necessary. The point is that a lot of time and money can be saved by having a more accessible truck engine. Reo trucks have a perfect way of solving that problem with an exclusive cowl-hinged hood that opens from the front bumper line.

When a mechanic starts to service a Reo engine he doesn't have to remove the fender. He's got all the working room he can use.



Last year all first and second place National Truck Roadeo winners, in all three events, drove Reo More-Load design trucks. If you know the Roadeo course, you know why it takes shorter wheelbased Reo trucks to win. Luck? Chance? Not when 22 State Roadeo contest winners drove Reo trucks, too!



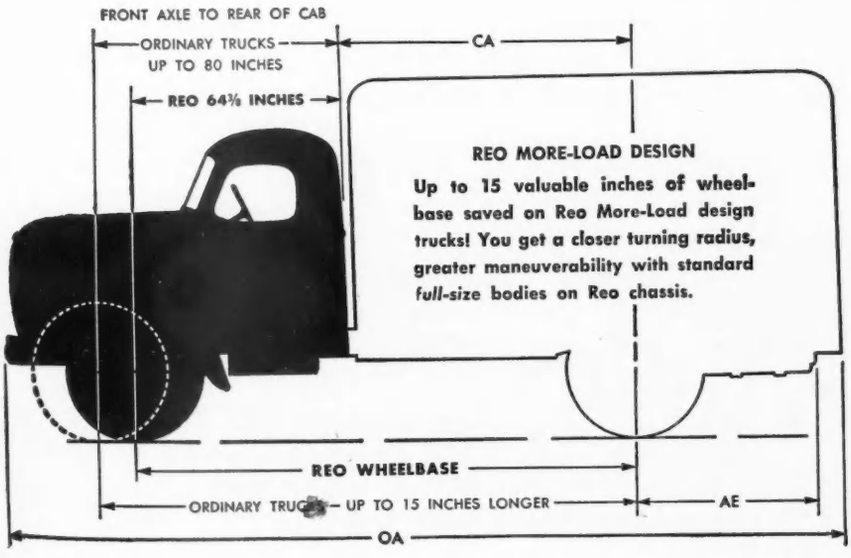
Slap, bang! Slap, bang! Twenty-four hours a day this Reo testing machine beats away at the pad and covering that goes into Reo cab seats. Quality parts throughout the Reo line of trucks are a result of continuous creative engineering thinking and practice. That's why Reo trucks hold up better, cost less to maintain.

Another factor that can have an indirect effect on decreasing truck insurance rates is the complete comfort of the driver. A driver's well-being is closely tied-in with his general outlook. Reo features, such as better cab visibility and handy control of accessories, do much to improve the driver's attitude toward safe, sane driving.

Much has been written and said about driver fatigue and its resulting consequences on the accident scale. One way to keep driver fatigue to a minimum is to assure him the best cab possible. Reo cabs offer a wide, cushioned seat, leg room to spare, and ideal, over-the-hood vision.

In addition to the safety Reo builds into its trucks there are many hidden extra values. Without paying more, Reo buyers get Tocco (electric) hardened crankshafts, seven main bearings, chrome-molybdenum cylinder blocks, dual-primary brakes or Timken Westinghouse full air brakes—*all as standard equipment.*

There is ample proof of safer, better performance with Reo trucks under all sorts of operating conditions. As a buyer who wants the most for his truck dollar, talk with your Reo dealer before you order *any* truck. Check the new Reo, the "Truck of Champions"—against any truck on the road. Reo Motors, Inc., Lansing 20, Michigan.



★

REO
TRUCKS AND BUSES

STANDARD OF THE HIGHWAY

FOR 16 YEARS more heavy-duty International Trucks have been bought by American commerce and industry than any other make.

International Model KB-8-1—Standard of the Highway—is but one example of the *complete* International heavy-duty line.

The International KB-8-1 was put in operation by first buyers early this year. Over-the-road truck operators and drivers everywhere acclaim it—

For its extra power to climb hills faster and maintain rigid schedules.
For its ability to carry more net payload, without exceeding its gross weight rating, than trucks with the same power but more chassis weight.

For every truck job there is an International of the right type, size and power, beginning with half-ton pickups and extending to giant off-highway trucks with GVW ratings of 90,000 pounds for logging, mining, oil field service, and construction work.

The International Dealer or Branch nearby will be pleased to show you how Internationals can serve you profitably.

Motor Truck Division
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

Tune in James Melton on "Harvest of Stars!" CBS Wednesday Evenings

THIS EMBLEM IDENTIFIES GREAT TRUCKS
INTERNATIONAL

INTERNATIONAL Trucks

CCJ READER DIGEST

Do You Know the Answers?

Check Your Knowledge

Fleet Operator Builds a Super Body

by GEORGE F. ARTHUR, Vice-President, John J. Casale, Inc.

MANY years ago we set out to increase the useful life of the various bodies in our fleet. At first, it amounted to strengthening and bracing the framework, prevention of wet and dry rot, and so on. In recent years, we have been building our own bodies—stock commerical equivalents of which cannot be obtained anywhere on the market today.

There is a good, time-tested reason for every detail shown in the detail drawing.

We have just developed a new body which, we believe, not only surpasses any of our standard bodies, but surpasses any body we have seen on the market today. The principal objectives sought by this design is greater strength and lighter weight than our current bodies, simplified maintenance and repairs, plus the elimination of one of the greatest problems in body maintenance—rot and rust along the sill due to the accumulation of moisture within the panels.

All the essential details will be found on page 42.

Hydraulic Powered Shop Equipment

by M. K. SIMKINS, Technical Editor, Commercial Car Journal

HYDRAULIC POWER is the most efficient workhorse of the modern shop, says the author of this, the fourth of a series of articles on selecting and servicing power shop tools and equipment. Users of such equipment bear out these claims; Hydraulic power is safe; it is easy to use; it is dependable, assuring precision work and a powerful force. Hydraulic equipment is long-lived, easily-serviced and economical to use. Equipment available today from a long list of manufacturers is scientifically designed for a variety of shop jobs which could not be performed practically and efficiently with hand or mechanical tools.

This list of as many as 25 different types of hydraulic shop tools with illustrations should provide the fleetman with valuable data with which he can better select such equipment when he makes a purchase. Manufacturers listed as well as those making other models will gladly send full details, specifications and prices. See page 50.

Logger Licks the Dust Bogey

by EDWIN FREEMAN, G. H. Clark Logging Co., Eugene, Ore.

DUST is the biggest enemy of our off-highway logging operations. Hauling terrific loads over mountain trails requires vehicles in perfect shape. To lick the dust bogey we use huge air cleaners on carburetor and air compressor inlets and service them at least twice a week. We lubricate the vehicles every day and change oil at very frequent intervals. A steam bath is in order once a week. Even at that service expense on off-highway units is much higher, overhauls much more frequent than on regular highway units.

But by licking the dust bogey, we also go a long way toward greater safety. Brakes are our most important item and by keeping them clean they work. We augment brakes with a special breakaway valve and front brake controls and automatic shutters on the front keep engines up to par on the long downhill grades. See page 54.

Fleets Wash Trucks On Regular Schedules

EXPERIENCE HANDBOOK ANALYSIS

by A. W. GREENE, Managing Editor, CCJ

THE old adage that good appearance reflects good maintenance apparently is subscribed to by COMMERCIAL CAR JOURNAL's Board of Experts, the majority of whom wash the vehicles in their fleet on some kind of regular schedule—daily, weekly, monthly, or anything in between—with weekly schedules in the lead, as shown in Table 1, page 65.

Weather is a great variable affecting washing. Over 52 per cent of the fleets reported that they wash less frequently in certain seasons—Winter, principally as shown in Table 2. Perhaps the most important observation about Table 2 is that, apparently, even weather conditions do not alter the regular washing schedules of almost 42 per cent of the reporting fleets.

On the qualitative side, Table 3 shows that the insides of the trucks are not being washed on any regular schedule. 52.85 per cent of the fleets report that they wash inside "as needed."

57.32 per cent of the reporting fleets always use a soap product or other detergent when washing their vehicles; 29.67 per cent use it occasionally. Of this combined group, 38.79 per cent use a detergent containing a wetting-out agent.

These and other facts highlight the first part of the Appearance Maintenance survey dealing with washing. Next month, the analysis will cover the type of washing equipment in use, types of washer personnel, the man-hours required to wash the different types of fleet vehicles, the rates paid washer personnel, and so on.

Question:

Can VALVES be Adjusted COLD to Give Maximum Efficiency After Engine WARM-UP?

ENGINEERS VARY

. . . in their recommendations. Some criticize hot settings due to improper interpretation of the term, "hot". Data based on test runs are impossible to duplicate in the field. Mechanics can't work fast enough to be accurate.

On the other hand advocates of "hot" setting say it is more positive and accurate due to the variations from engine to engine and from cylinder to cylinder after warm-up. Various types of metal account for different expansion coefficients.

On one point they all agree. The subject is very controversial.

Hot Settings are More Accurate

by J. C. Martinka

Remco Products Co.

"Valve lash setting is a quite controversial subject. We feel, however, from our experience that a much more positive and accurate setting can be obtained with the engine in a hot condition. There are so very many points of variations engine to engine and from cylinder to cylinder in individual engines which will effect individual tappet clearance on the various cylinders when engine reaches its normal operating temperature. This fact with the various types of steel being used in valves has caused us to recommend that all settings be made with a hot engine.

"It is necessary of course in some cases that a cold setting be made. In such cases it is preferred that the tappet clearance exceed the hot setting clearance by a very wide margin. This in turn would tend to give a rather noisy engine and will to some extent effect available power with a given cam design.

"We realize the above is a rather generalized discussion inasmuch as the individual case cannot be solved with a few sentences."

Adjustment Subject to Many Variations

by V. C. Young

Chief Engr. Wilcox-Rich Div. Eaton Mfg. Co.

"The matter of proper lash settings is very controversial. This is strictly an engine manufacturer's problem. There is no way that we know of anticipating lash requirements without actual tests, and these are always subjected to many variations. In general with an L-head engine there are only minor differences between a so-called cold setting and hot engine, providing the hot engine is taken at low speed and without load.

"With the conventional L-head engine there is always a variance in distance from the camshaft to the valve seat under various types of operations; also, there is a variance in the length of the valve and tappet. In general the distance from the cam to the valve seat increases as the engine heats up due to expansion of the crankcase and the cylinder block. In like manner the valve increases its length, and this is the biggest variable since its temperature is affected by:

1. speed
2. throttle opening
3. mixture ratio
4. type of material used
5. amount of valve stem exposed to exhaust gases, etc.

"A typical setting would be somewhat as follows: with the cold engine .015 lash; with the jacket water and oil temperature up to normal operating temperatures but at low speed and no load (such as idle), lash would probably be about .013-.015—i.e.: very little change. At low speed and full load, or wide open throttle, the lash would decrease to possibly .010 and gradually decrease as the speed was increased—all at wide open throttle so that at the top speed of the engine the lash might have decreased to .004.

"On an overhead type of engine it is difficult to predict since in addition to the growth of the cylinder and cylinder head the lash is also affected by the change in length of the pushrod and the rocker arm fulcrum.

"From the above you can readily understand why it becomes such a difficult matter for anyone other than the engine manufacturer to determine the required amount of lash. This is one of the reasons we believe the only answer to this problem is to eliminate lash adjustment by the use of automatic lash type of lifters."

The Conference Corner

HERE'S YOUR MAINTENANCE PROBLEM

. . . discussed by factory engineers. You will find some interesting comments on these pages. Their recommendations may help you determine your valve adjustment technique.

Since the question is controversial, you get both sides—and some good practical reasoning in either case.

True, we can't always get a decision—but we can bring you the best engineering thinking on a subject.

Please let us have your problem as soon as possible, so we can select appropriate representatives to study it for you. Address the Technical Editor, Commercial Car Journal.

Engine Variations Necessitate Hot Setting

by G. W. Thomas

Assistant Chief Engineer
Continental Motors Corp.

"You ask whether the valve lash can be adjusted accurately when the engine is cold. The answer is yes, it can be if the variables are known and predictable. The next question and answer will probably clarify this a little.

"Why do engine manufacturers prefer to specify hot settings when it is so much easier to set the valve cold? The answer, in this case, is that there may be variations through the engine block due to water flow, metal distortion, etc., plus the fact that valves grow in length when heated. It, therefore, is much safer from a life and maintenance standpoint to adjust the tappets with the engine hot.

"I realize that many times the vehicle design does not lend itself to making adjustments when the engine is warm or hot. In this case, it will be necessary to adjust them cold; although I believe the tendency would be to set the tappets a little wide in order to compensate for any unknown that might develop later.

"This extra tappet clearance obviously can become dangerous, as the cams are designed with a certain opening and closing ramps, based on a certain clearance, which, if not followed, allows the valve to strike its seat with considerable force instead of being eased to position by the contour of the cam."

Cold Settings are More Accurate

by R. H. Wilson

Assistant Service Manager
Waukesha Motor Co.

"We have consistently published valve lash settings to be checked or set when engines are 'cold.'

"Our specific reasons for publishing 'cold' settings are as follows:

1. The broadcast of 'hot' settings is of little value because there is apt to be quite wide variations among operators in their interpretation of the term 'hot engine.'
2. 'Hot' settings must be based upon test runs with engines operating under full load—maximum speed conditions that are almost impossible to duplicate in vehicular operation and are difficult to duplicate under a large percentage of industrial engine operating conditions, especially when full load cannot always be applied.
3. Mechanics cannot be expected to work fast enough on hot engines to arrive at accurate and positive valve settings because the valve lash increases very rapidly once an engine is stopped.
4. 'Cold' settings are preferred because they can be based upon results obtained from thoroughly controlled laboratory test runs. The data obtained in this manner has been found to be thoroughly dependable and can be duplicated with ease by mechanics or operators.

"Aside from the above statements, and for your information, we wish to mention that many of our laboratory and test room attendants would prefer to be given almost any assignment in preference to making valve lash tests with hot engines. There is the element of working at high speed to make their checks before the engines cool down—burned fingers and the ever present danger, especially when engines are of the larger sizes, of spark igniting the crankcase fumes."

Cold Setting May be Used Eventually

by Norman Hoertz

Chief Engineer
Thompson Products Co.

"I have made several checks on this particular subject and find that there is no real hard fixed thinking on the subject. Some manufacturers have the feeling that a cold setting should be arrived at, but in the normal work most of the settings have been made hot and likewise had been set up on the basis of the engine being hot.

"I think most manufacturers realize the inaccessibility in trying to set tappets in the hot condition so possibly at some future date, cold settings could be arrived at. We might point out that in the aircraft industry all the settings have to be made cold."

Prefer Hot Settings Because of Variables

by H. G. Smith

Executive Engineer
The Buda Co.

"This is quite an old subject, I think, and it has been one that has been discussed on many occasions. I have always contended that the hot engine setting is the only satisfactory way of setting a valve even though the cold setting is more convenient under certain conditions.

"The expansion and contraction of various parts of the engine, of course, is the reason why hot setting is different than the cold setting. Recognizing this, I think we should definitely decide to set all engines with the hot setting, and then we have a uniform condition.

"The cold setting, of course, may be made at 30 deg or maybe 110 deg, and there is a difference in the expansion of the parts under these different temperatures, and therefore, you have a variable, whereas, when you set an engine hot, the difference between the temperature that you might set and the actual maximum temperatures that the parts might reach under full load are very small, but I think the difference between the hot setting to a running setting versus the variations between low temperature cold setting and high temperature cold setting is much preferable.

"I therefore feel that the hot setting should be used."

WEEKLY CAR EXPENSE ACCOUNT
WM. WRIGLEY JR. COMPANY

MAIL WHITE AND PINK COPIES TO THE OFFICE. RETAIN THE TISSUE COPY

SPEEDOMETER READINGS
PRESENT_____
PREVIOUS_____
TOTAL MILES_____

CAR NO._____ WEEK ENDING_____ NAME_____

DATE	GASOLINE GALS	GASOLINE COST	OIL QTS	OIL COST	LUBRICATION—GREASE TYPE	LUBRICATION—GREASE COST	GENERAL MERCHANDISE ATTACH RECEIPTED BILLS	SUNDRY	WASH POLISH	GARAGE STORAGE	PARKING TOLLS	TOTALS
WEEK'S TOTALS												

$940

WEEKLY SAFETY INSPECTION REPORT

ITEM	SAFE	UNSAFE	REMARKS
TIRES			
PRESSURE			
PEDAL BRAKES			
HAND BRAKES			
STEERING SYSTEM			
HORN			
HEADLIGHTS			
REAR LIGHTS			
WIPERS			
OIL LEVEL			
RADIATOR LEVEL			
BATTERY LEVEL			
CLEANLINESS INSIDE			
ALL GLASS			
CHECKED SERVICE RECORD	YES	NO	

EACH OF ABOVE ITEMS INSPECTED AS INDICATED_____
SIGNATURE

You are requested to spend one-half hour each week making the above inspection. We would suggest you complete this work just before putting the car away for the week end.

FIG. 1 (above) Drivers must complete safety report at end of each week

FIG. 2 (upper left) No driver forgets expense account, so safety report is printed on back of same form

Remote Control

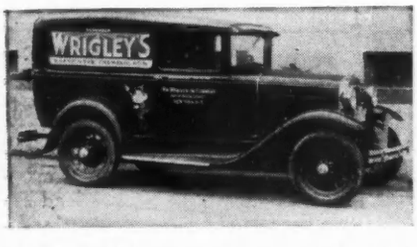
of Scattered Fleet

Wrigley's 200 passenger car drivers are "on their own" but careful supervisory and maintenance routines keep driving habits, safety records and service operations in line

by **RANDALL R. HOWARD**

NORMALLY EACH of the 200 company-owned passenger cars operated by the Wm. Wrigley, Jr., Co. of Chicago will be seen at one of the three regional headquarters (Chicago, New York or Los Angeles) only twice during its entire company operating life. This will be (1) immediately after it has been purchased as a new car and field representative is ready to drive it away to his assigned territory; and (2) usually about two years later after this representative has driven it back to a company headquarters for final turn-in on another new car.

In between these headquarters visits the cars will be operated by field representatives in restricted territories embracing all 48 states. It is ob-



Early Wrigley cars were rolling billboards featuring advertising displays for company products. Later versions

(above) had only company name on door while newest models are standard two-door sedans (right), with red wheels

WM. WRIGLEY JR. COMPANY

AUTOMOBILE MASTER RECORD

CAR NO.
BRANCH

REFERENCE DATA		FIXED EXPENSES							
		ANNUAL	YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT
MAKE MODEL	COST	INSURANCE-							
MOTOR NO.		FIRE AND THEFT							
SERIAL NO.	LIST PRICE $	P.L. AND P.D.							
DATE PURCHASED	EQUIPMENT	DEPRECIATION-							
DEALER		REGISTRATION-							
TIRES SIZE		TAXES							
DATE SOLD SALE PRICE $	TOTAL COST	MONTHLY							
SOLD TO		INSURANCE-							
ADDRESS	DISCOUNT	DEPRECIATION-							
REGISTRATION - 194									
STATE	NET COST $								

COST ANALYSIS

PERIOD	MILEAGE	OPERATING EXPENSES									OTHER EXPENSES					TOTAL OPERATING COST	FIXED EXPENSES		TOTAL SALESMEN'S TRANSPORT COST
		GASOLINE		OIL		LUBRICATION	ORDINARY REPAIRS			RUNNING COSTS	WASH & POLISH	GARAGE & STORAGE	PARKING & TOLLS	ACCIDENT REPAIRS	MISC.		TAXES & LICENSE	DEPR. & INSUR.	
		GALS.	COST	QTS	COST		EXPLANATION	LABOR	PARTS	TIRES									

SERVICE RECORD OF CAR NO.____
WM. WRIGLEY JR. COMPANY

You are to put the following services on your Company car at the mileage indicated. A copy of this record will be kept on file in the office and your car expense reports checked to see that all services are performed as requested. (Check off each item of service as it is completed.) This record must be kept in the glove compartment of your Company car.

Speedometer Reading	Lubricate Chassis 1,500 miles	Change Oil 2,000 miles	Clean Air Cleaner 3,000 miles	Clean Plugs 5,000 miles	Adjust Carburetor Spring and Fall	Adjust Distributor Spring and Fall	Check Shocks Yearly (Fall)	Pack Wheels Yearly (Fall)
Transmission and Differential - Keep full. Do not refill without authorization.								
500		x						
1,000	x	x	(at 1,000 mile inspection)					
2,500	x							
3,000		x	x					
4,000	x							
5,000		x		x				
5,500	x		x					
7,000	x	x						
8,500	x							
9,000		x	x					
10,000	x			x				
11,000		x						
11,500	x		x					
13,000	x	x						
14,500	x							
15,000		x	x	x				
16,000	x							
17,000		x						
17,500	x		x					
19,000	x	x						
20,500	x			x				
21,000		x	x					
22,000	x							
23,000		x						
23,500	x		x					
25,000	x	x		x				
26,500	x							
27,000		x	x					
28,000	x							
29,000		x						
29,500	x		x	x				
31,000	x	x						
32,500	x							
33,000		x	x					
34,000	x							
35,000		x		x				
35,500	x		x					
37,000	x	x						
38,500	x							
39,000		x	x					

FIG. 3 (right) Service record provides 67 service operations (up to 39,000 miles) in abc language

FIG. 4 (above) All entries on expense account are transcribed to master card

vious that a supervisory and maintenance program by such long-distance remote control must be carefully planned.

During the two-year period of away-from-headquarters operation, the car will be briefly inspected about once a month by the company's Division Manager for the restricted territory in which the car is being operated; otherwise the driver of the car will be held responsible for its proper maintenance, guided by strict company operating regulations. The only exceptions to this normal life-history for a Wrigley car would come if (1) the car should be so badly wrecked in a traffic accident as to demand an immediate replacement; or (2) if the field representative using the car should be replaced. Neither of these possibilities have often happened with the company.

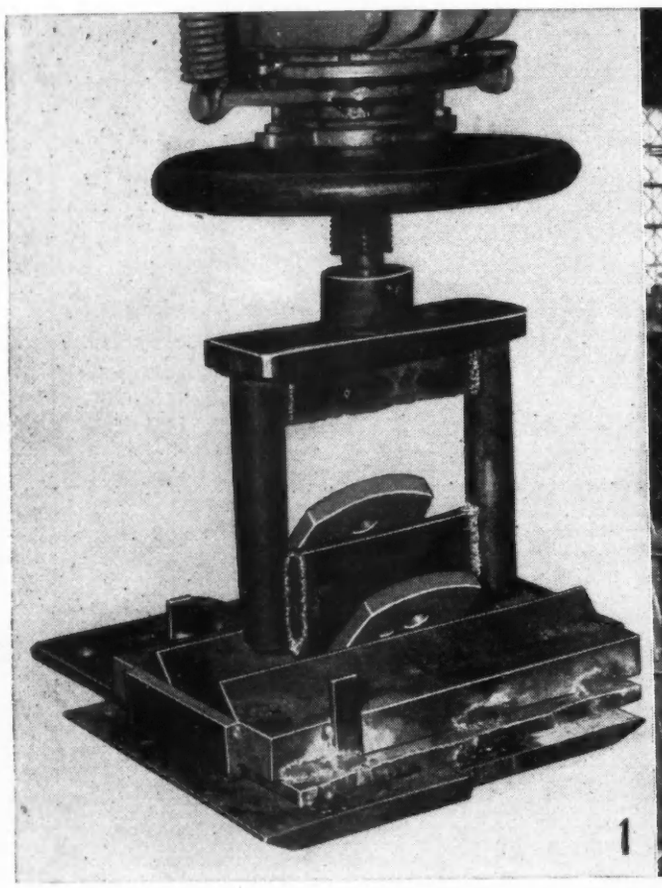
The present Wrigley program for the long-distant maintenance of its fleet has been developing through a period of about 18 years. The fleet is now under the supervision of C. L. Snyder, Fleet Manager at the general offices in the Wrigley Building in Chicago. Some of the operating principles and rules for a company-owned car are:

1. Standards for selecting make and type of car.
2. Training the field representative in car operating and maintenance methods.
3. Regulations as to car appearance and use.
4. Traffic safety rules.

(TURN TO PAGE 157, PLEASE)

COLD Bending with a

Missouri Highway Dept. finds it can cold bend steel up to 1 in. thick and turn out a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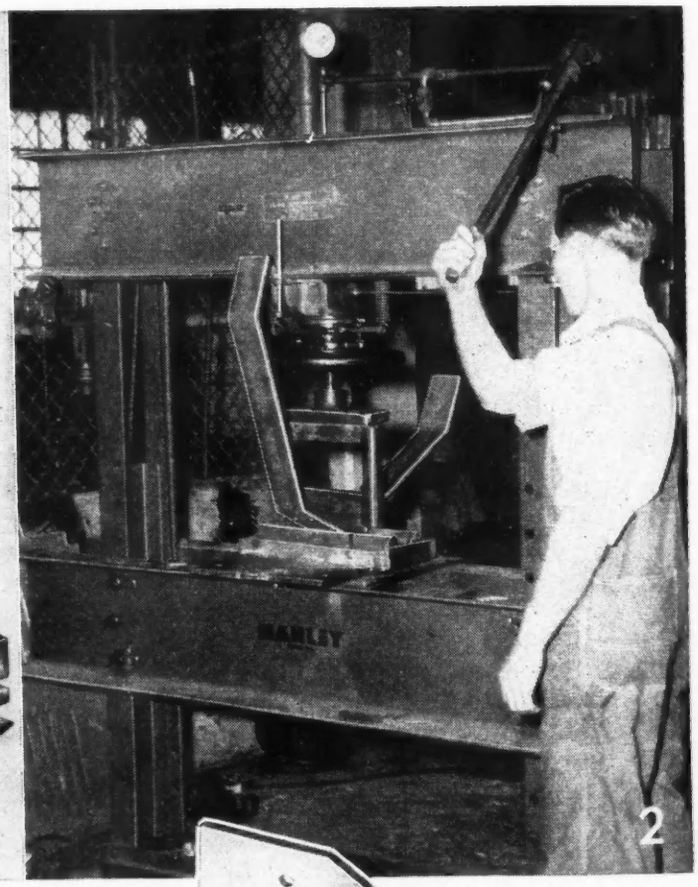
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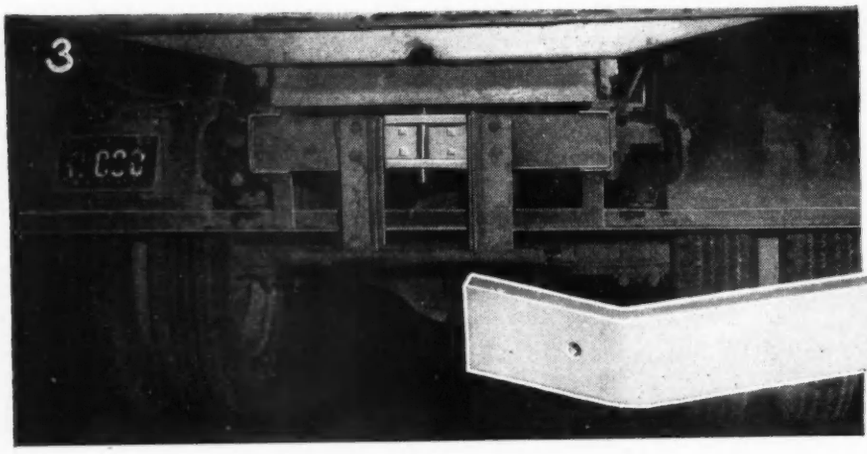
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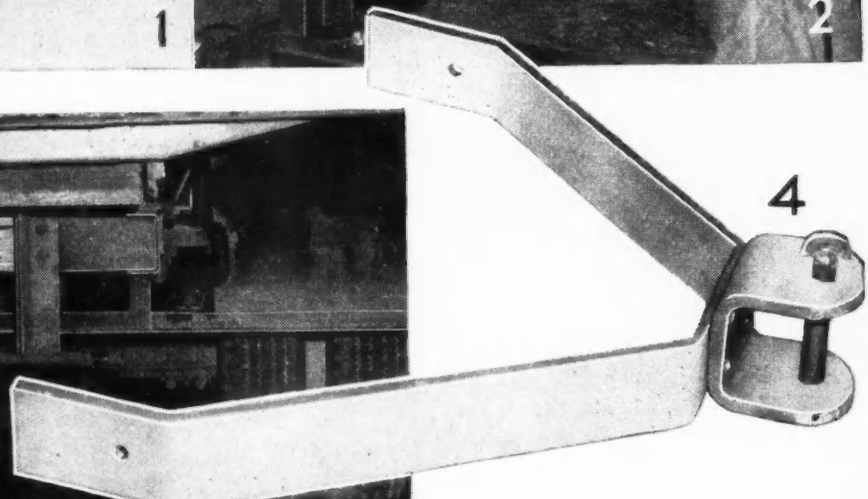
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HYDRAULIC PRESS

variety of production parts at surprisingly low cost

by L. H. HOUCK

THERE'S AN OLD machine shop saying that the possibilities of an engine lathe are limited only by the ingenuity of the operator. This might equally well be said of the conventional hydraulic press, now a permanent fixture in many automotive shops.

The hydraulic press is often restricted to the prosaic task of press fitting and disassembly but its range of usefulness can be extended with shop-made special purpose dies that make possible a varied production of cold-bent parts made from flat steel up to an inch thick.

The headquarters garage of the Missouri State Highway Department at Jefferson City, through such extended use of its hydraulic press, has netted some very worth-while savings. Since there is no point in manufacturing something which can be bought cheaper already made, their extra-curricular press production has been restricted to practical classifications. It only makes products that cannot be bought, products that need to be made different or better, or products

(TURN TO NEXT PAGE, PLEASE)

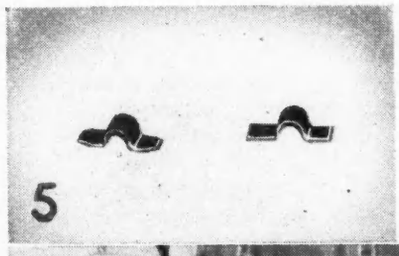
TRAILER HITCH

One of the principal production items to come from the Missouri State Highway Department's 80-ton hydraulic press is the standardized trailer hitch illustrated at left. The same shop-built male and female dies are used to form the clevis (Fig. 1) and the bracket (Fig. 2). On some trucks the clevis can be mounted directly on the truck frame (Fig. 3) but usually clevis and bracket are welded together to form the complete hitch (Fig. 4).

The clevis starts out as a steel blank ⅝ in. thick, 6 in. wide and 16¼ in. long. Originally holes were drilled before bending, but this resulted in a slight egg-shaped distortion. Now holes are drilled after bending. At one time it was thought necessary to slot the outside of the bend, then weld up the crack. A somewhat larger bending arc, a slightly slower bending speed and a more ductile grade of steel made this unnecessary, saving considerable time in overall operation. The bracket is formed from similar stock using less critical bends.

Either piece can now be produced at the rate of 10 to 15 an hour even with hand-operated pump. Installation of power pump will speed up the process even more. This rate compares with 30 minutes to an hour a piece for the old-fashioned-blacksmith operation which lacked uniformity and obviously cost many times the price of the press formed job.

Hitches are painted and held in stock for delivery to all shops in the state highway set-up.



HOLD-DOWN CLIPS

Most commercial hold-down clips have only one ear. The Highway Department needed a stronger double-eared job (Fig. 5) to hold down highway recorder tubes and copper tubing in the shops. So they formed male and female dies (Fig. 6) out of stock materials and now produce the clips at the rate of 140 an hour, and as many as 10 abreast on a single stroke.

The stock is 13-gage steel, 1 in. wide. It seemed a shame to cut up long strips of steel to make the part and a survey revealed that a local fan factory had scrap of almost the exact requirement. Now the stock costs virtually nothing.

COLD Bending . . . .

(Continued from page 39)

that may be temporarily out of supply. Several of these illustrated and fully described in the picture sequences on these pages.

Several of these are illustrated and fully described in the picture sequences on these pages.

The Missouri shop has the opportunity for quantity production since ten other divisional garages in the state draw on the headquarters parts department for supplies. This quantity has the added advantage in amortizing the labor cost of manufacturing their own special purpose dies. The material cost was rated at almost nothing because most of the material was rescued from the junk or scrap pile and in one case, the raw material was waste strips of steel from a fan factory.

Experience gained in cold bending, making dies and doing a production job in a hydraulic press, is also a valuable asset to the shop when emergencies arise.

The Missouri State Highway Department's press is an 80-ton hydraulic equipped with a two-speed manually-operated pump which was bought for conventional assembly and disassembly work. Extra production has not interrupted its regular use and only makes it more valuable.

Cold bending on the press on a

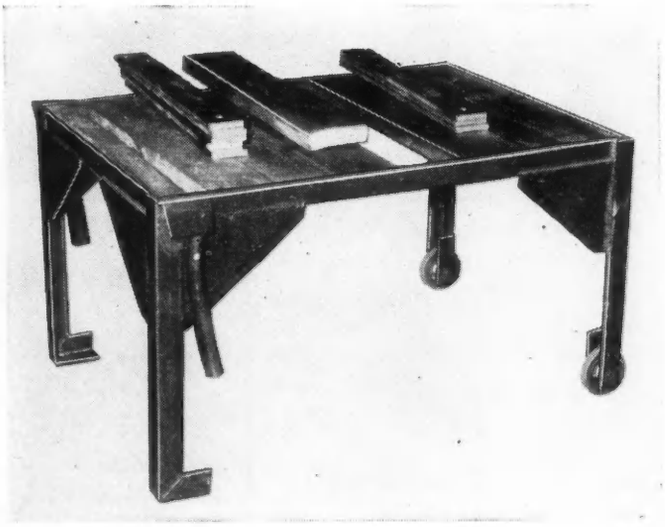
(TURN TO PAGE 170, PLEASE)

PEDESTAL GRINDER

Although not a product of the hydraulic press this shop-built pedestal (above) is noteworthy. After first cut in paper patterns the four steel side pieces were arc-cut and welded together, then filled with sand. Even heavy grinding jobs can now be done without anchoring grinder to floor.

UNUSUAL SHOP TABLE

Still another shop-built item is this portable work table which can be trundled about the shop easily on its front-leg rollers. Note that handles drop back by gravity when not in use. Two-inch oak planks in top rest on angle irons, can be removed to accommodate odd pieces such as a differential housing.



FENDER BRACE

The fender brace, illustrated at left, is another example of cold bending on the press. Top photo shows the two pieces that are bolted together to form the complete brace shown installed on a truck in the lower photo. Both pieces are bent to slightly less than designed angle so that they will be under tension when assembled. Note also the offset angle of the pieces accomplished by placing the work under the press at the angle desired.

The OVERLOAD

Let's Declare War on Inadequate Bridges, Bridge Formula and Incompetent Engineers

by GEORGE T. HOOK
Editor

THIS country should get into another war. It should be a war to the death on the Bridge Formula method of determining the gross vehicle weight permissible on highways.

* * *

Are you familiar with the Bridge Formula method? It is the method whereby a few feet of bridge wash out the full capacity of miles of highway. Fifty miles of highway may be capable of carrying 80,000 lb vehicles, but if along those 50 miles there should be a 50 ft bridge that can stand only 40,000 lb, the limit for the highway is 40,000. This is what might be termed deficit engineering. From the standpoint of economics and efficiency, this sort of highway engineering results in a deficit to the State and to the Nation.

* * *

A Bridge Formula usually takes this form: 700 (L+40). The "L" is the distance in feet between the first and last axles of the group of axles considered. It is almost always (L+40) but the constant may vary anywhere from 650 to 1330. One State has three constants—670, 1000 and 1330—to take care of three different types of bridges. For a truck with a wheelbase of 18 ft this means that, although the highway surface is identical, you can have a gross weight of 38,860 lb, 58,000 lb or 77,140 lb, depending upon the bridges in your path. In the majority of Bridge Formula States even though the bridges are of different types the engineers have compromised on one constant to care for all. In short, some bridges are not even permitted to carry their maximum load capacity.

* * *

For the preservation of bridges that are obsolete, in terms of modern highway construction standards, the Bridge Formula is wonderful. But for full utilization of highways, with all the benefits to society that follow, it is an economic brake. In too many cases it is also a handy political tool for enemies of highway transportation. By focusing attention on what larger gross weights would do to bridges these enemies distract attention from what the bridges are doing to prevent full utilization of highways.

* * *

A war on the Bridge Formula, which is used by 19 States, would actually be a war on obsolete and inadequate bridges. As such the campaign would take in other States where the preservation of bridges influences the gross weight thinking of public officials.

* * *

Instead of being determined by what bridges will stand, gross vehicle weights should be based on what the highway will stand. Bridges should be rebuilt or buttressed to the capacity of the highway. On roads where traffic does not warrant such expenditures, the bridges should be posted for their maximum capacity.

* * *

This is a fight that should engage the support of automobile clubs and car owners. It is shortsighted for them to argue that bridges do not impede passenger cars; that their only interest is in bridges that are wide enough not to bottleneck traffic. They should bear in mind that investment of millions in highways should bear commensurate returns; that the full use of such highways will bring great benefits to them as private citizens, as consumers who are affected by every impediment to more economical and efficient use of our costly highways.

* * *

As stockholders what would be our attitude toward management of a private industrial enterprise if that management tolerated an obsolete machine which curtailed the output of other more modern machines which were dependent upon it? Such unbusinesslike conduct, obviously affecting the returns upon our financial investment, would result in management being called to book. As citizens and taxpayers we are all stockholders in a gigantic, billion-dollar highway enterprise. And as stockholders we should insist that our investment bring the maximum in returns. The full utilization of modern highways should not be obstructed by obsolete bridges and formulas devised for their preservation.

* * *

THIS leads us, by a natural association of ideas, to consideration of the highway engineer. The highway engineer we have in mind is the top engineer in the highway department, the man in the State Capitol who determines policies, who advises the Secretary of the Highway Department, who in turn advises the Governor.

* * *

It is unfortunate—and the community has only itself to blame—that the majority of such engineers lack the competence which their highly responsible position demands. Most States underpay these positions so that they attract individuals who in qualifications are as poor as the pay. On top of this they are political appointees, bound to serve their sponsors and mindful to do and say what is politically expedient. Those who are equipped for their jobs and who have the courage of convictions founded in sound engineering, are greatly outnumbered by the political incompetents.

* * *

Resolutions recognizing and decrying this state of affairs have been passed time and again by the American Automobile Association, the American Trucking Associations, state associations of various highway user groups and by the Highway Transportation Congress sponsored by the National Highway Users Conference. Isn't it time to implement the pretty words and worthy motives with a remedial course of action?

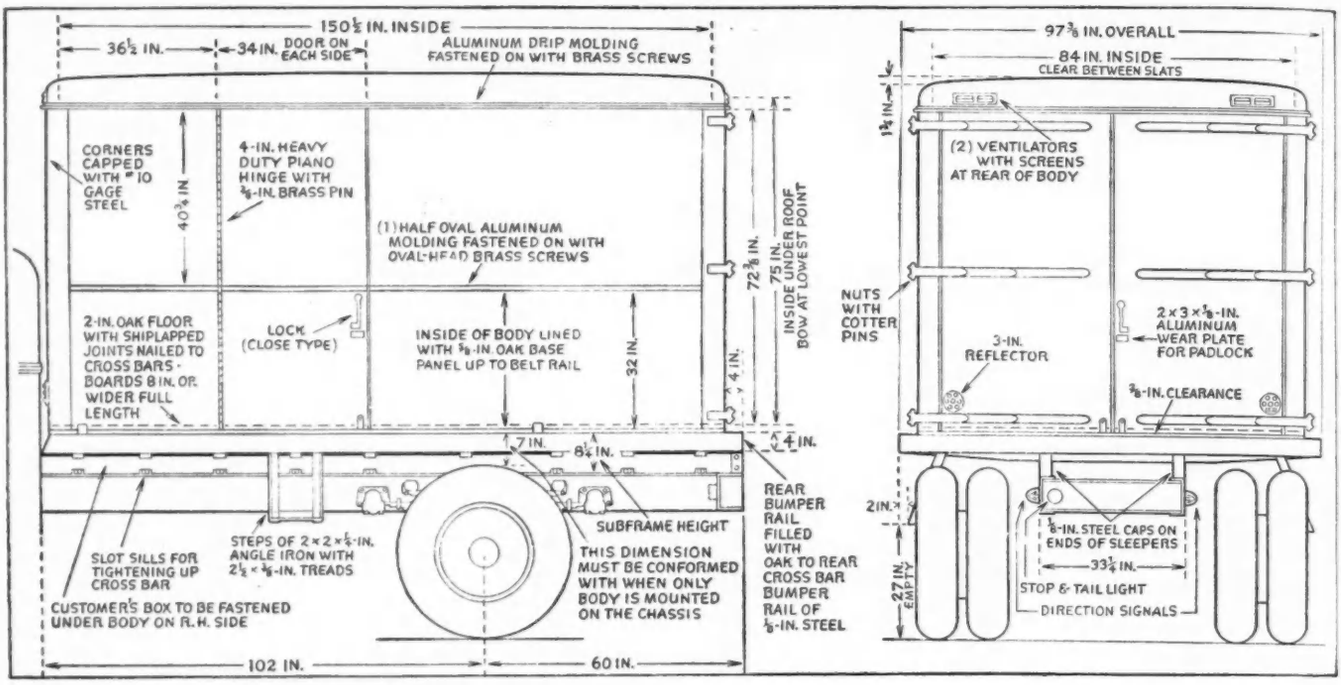
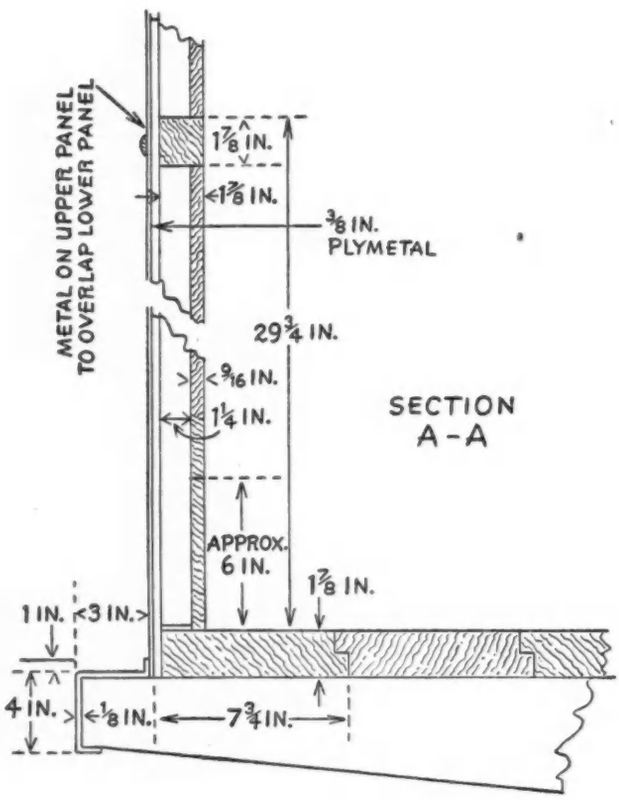


FIG. 1 (Above) This drawing shows the exterior details of the standard wood and steel bodies built by John J. Casale, Inc. for many of the company's contract hauling accounts

Below. Section A—A, showing construction details of sides and side rub rails. Other details are fully illustrated in Fig. 2



by GEORGE F. ARTHUR

Vice-president, John J. Casale, Inc., New York.

Fleet Operator

IT HAS BEEN our observation that, until recently, truck manufacturers have been far ahead of truck body builders in manufacturing a product that could take a lot of hard wear. The average body went to pieces in a comparatively short time in heavy-duty service. True, good bodies were available, but only from certain custom body builders.

Many years ago we set out to increase the useful life of the various bodies in our fleet. At first, it amounted to strengthening and bracing the framework, prevention of wet and dry rot, and so on. In recent years, we have been building our own bodies—stock commercial equivalents of which cannot be obtained anywhere on the market today.

In the intervening years, we learned a great deal as to what makes a body stand up under heavy-duty service. We have mastered the technique so thoroughly, that most of our current bodies outlive several chassis.

An idea of the type of body that comprises the major portion of our 1500-vehicle fleet today will be found in Figs. 1 and 2. These illustrations are reproductions of blueprints of our current beer body which is used on approximately half of the vehicles in the fleet.

From Fig. 1, which shows exterior details, it can be seen that this body is 155 in. long, exclud-

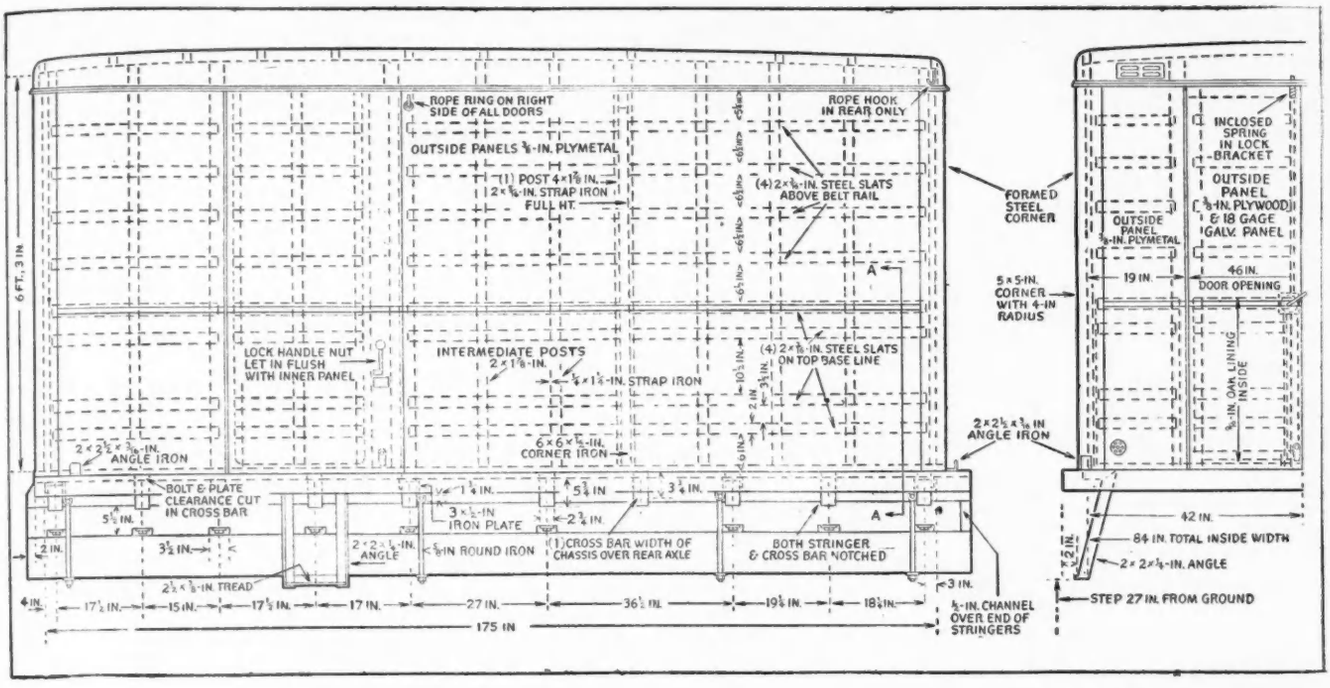


FIG. 2 Many of the reasons why Casale bodies outlive several chassis will be found in the various construction details shown above. For section A—A see Page 42. Details of new, all-steel body are shown in Fig. 4, Page 44

Builds a Super Body

Casale bodies are custom-built to exacting specifications; cost more initially but save in the end by outlasting several chassis. New steel body promises even longer life

ing the rear rub rail and bumper and the space between body and cab. The illustration also shows that the inside dimension is 150½ in. This means that the overall thickness of the body is 2¼ in., which is less than the usual bodies in this type of service. Yet, we know from experience that this body will take two or three times the punishment that standard commercial bodies of this type can take. The reason will be found in the construction.

A close study of Fig. 2 will reveal that our specifications are of the custom type, rather than commercial, construction. The majority of bodies have, for example, cross bars set at 2-ft intervals. It will be readily seen that the cross bars in this body vary from 15 to 27-in. centers. These spacings are not arbitrary but, rather,

(TURN TO NEXT PAGE, PLEASE)

Illustration at right shows a typical Casale body as used in the service of The F. & M. Schaefer Brewing Co., Brooklyn, N. Y. Construction details will be found in Figs. 1 and 2

FIG. 3 These illustrations show the first new, all-steel body built by Casale. For details, see sketch at right

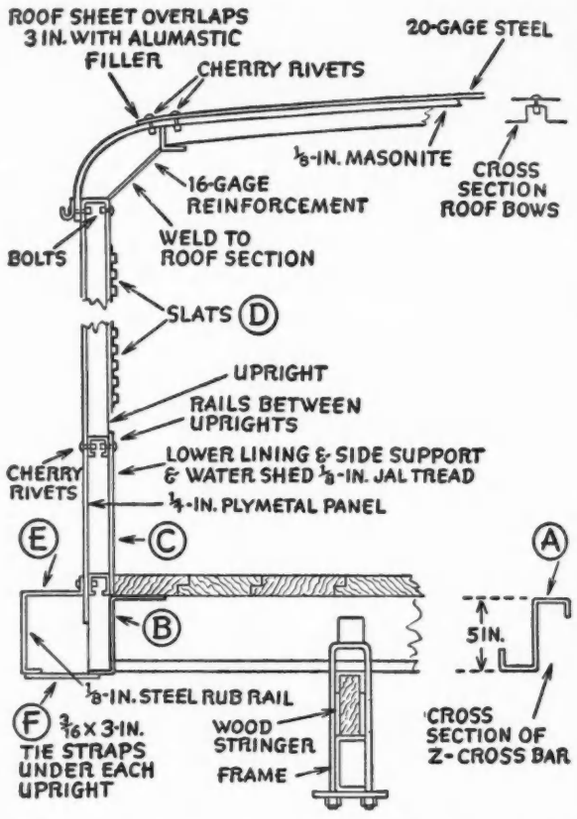


FIG. 4 Sketch showing some construction details of new all-steel body. Principal features are explained in text

laid out according to careful calculations based on basic shock load weights and maximum load requirements. There is a good, time-tested reason for every detail.

As another example, it will be noticed that 1⅜-in. roof bows are used. For a body of this size, these bows are approximately 30 per cent heavier than provided by commercial standards. The object of using such heavy bows is not to provide special strength against any vertical stresses but, rather, to provide greater than usual rigidity, an important factor in body longevity.

A common observation by fleetmen who have seen these drawings and examined our bodies is that these above-standard features must make our bodies expensive. Our reply always is that it all depends what one means by the word "expensive." If it refers to initial cost, we readily admit that 1⅜-in. bows cost a bit more than 1-in. bows. However, the labor cost for installing them is no different, and, what is most important, that small difference in initial cost is worth its weight in gold when it comes to reducing the body's maintenance, doubling or tripling its life span, and keeping it looking ship-shape throughout its life.

Some of the other features that are worth far more than they cost are the ventilators we install at the top on both sides of the front and rear of these bodies, which help combat rot and rust caused by excess moisture; the 3 x 4-in. rub rails on both sides, the 6-in. rear bumper, and the drains in the floor at the front end.

There are many more special features, as a detailed study of the illustrations will show. A simple item such as the 2 x 3 x 1⅜-in. aluminum plate under the door handles serves as a wear plate for the padlock. This prevents unsightly scratching of the body finish at this point, and the frequent need for refinishing to restore the appearance and prevent rust.

Another item is our insistence that all door hinges be of the continuous type and have ⅜-in. brass pins inside. A small detail, perhaps, but it is beneficially reflected in easier operation and maintenance.

It is because of these details that our bodies stand up so well. It may bear repetition that we do not scrap our old bodies. As mentioned in the preceding article (Page 36, July, 1948, CCJ), there is a demand for our old bodies whenever we wish to dispose of them.

Newest Body Is All Steel

ONE of the reasons we dispose of our old bodies is the development of new major features or the design of a completely new body, as is the case at present.

We have just developed a new body which, we believe, not only surpasses

(TURN TO PAGE 000, PLEASE)

LOOK! HEED! POST!

This will kill you—slipping on a greasy floor. So get some tacks and save those backs. Tack this page on your bulletin board so all your men can get acquainted with its timely message.

This suggestion is guaranteed to save you money in one easy lesson. How? By speeding repair work, by cutting accidents, by improving maintenance efficiency, by improving employee morale.

Watch the Board next month. We'll tell you how to keep off the "ground" by not being the "live wire." Your boys will get a kick out of it.

CCJ Bulletin Board

The Damn Lube Waltz

You May Slide to Purgatory on a Greasy Floor

You are not a graceful sight waltzing down a greasy shop floor with a heavy replacement part or a tool box. You may be a humorous figure when you skate through the debris, but it is costly entertainment.

Slipping on a greasy floor is a poor way to make ends meet. So let's take some safety steps to eliminate the dangerous steps.

Because:

GREASY FLOORS CAUSE ACCIDENTS. Even if you are good at negotiating the "hazard course", you may slip and break that rear end you are carrying.

GREASY FLOORS ARE FIRE HAZARDS. A spark from a cigarette, or even an exhaust may set off conflagration in grease-ridden areas.

GREASY FLOORS ARE LIGHT CONSUMING. Dark areas absorb light, the light you need to see what you are doing. Clean up the floor and see what a difference in lighting you get.

GREASY FLOORS CAUSE PARTS FAILURES. The dirt and foreign particles caught in grease will eventually find their way into bearings, cylinders or crankcases to cut life span appreciably.

GREASY FLOORS DESTROY MORALE. No one likes to work in a littered stall. If your shop is dirty, you may have a tendency to put out sloppy work. You sometimes don't feel like "putting out" — and its probably because of the disheartening effect of a dirty floor.

GREASY FLOORS ARE TIME CONSUMING. You can't work efficiently if your tools are greasy, if your back is greasy, if you have to "span" an area before you can get to the truck.

GREASY FLOORS CAUSE POOR WORKMANSHIP, because you can't get into position to tighten, loosen, or adjust properly.

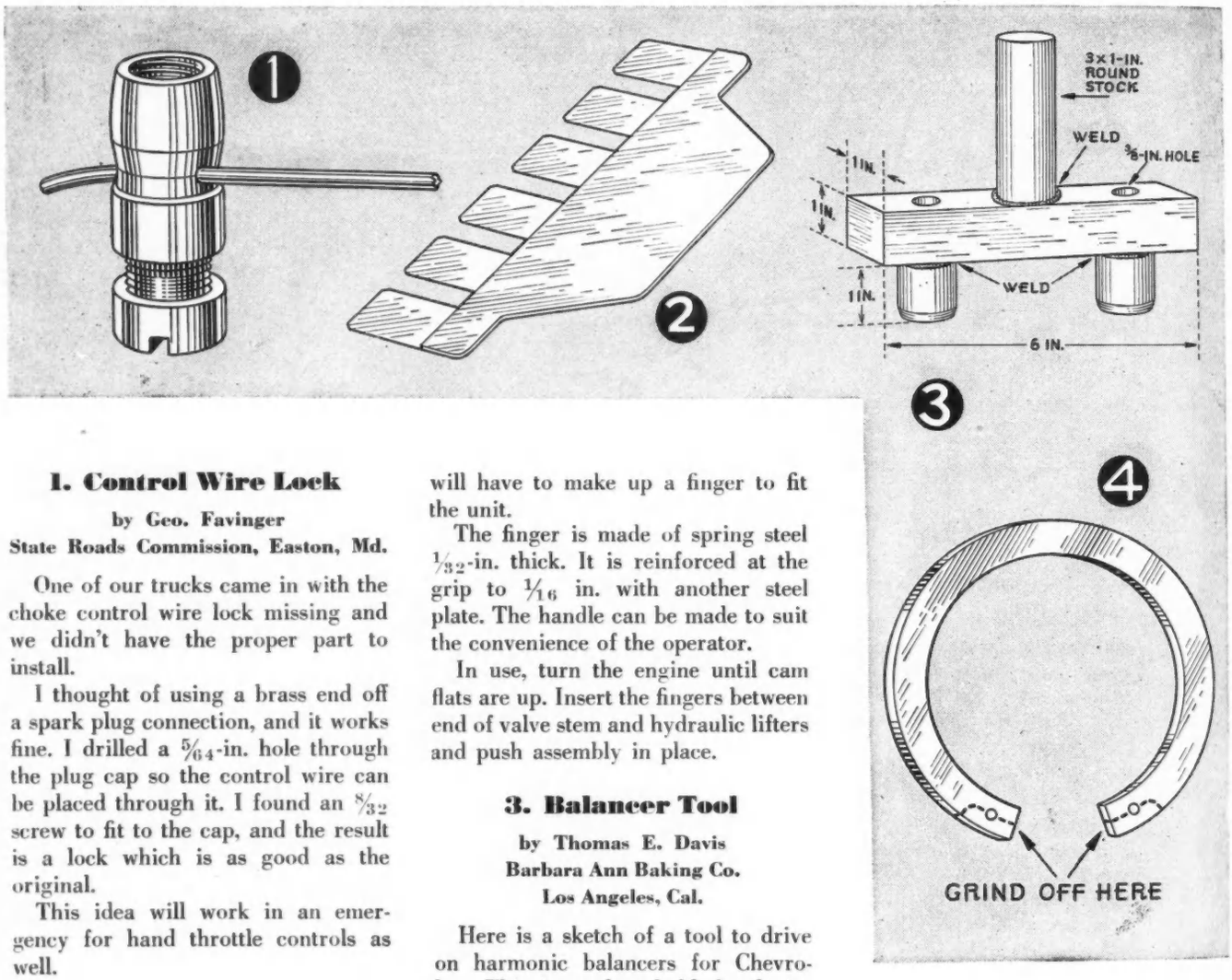
GREASY FLOORS ARE UNNECESSARY. A little time and solvent or floor cleaner will take care of it in jig time. The material is inexpensive and the time spent in cleaning the area will be made up in increased work output on the next job.

So you may waltz around again, Willie, but if you keep that damn lube off the floor, Bill, you will cut a neater rug.

SHOP HINTS FROM FLEET SHOPS

$25

For the Best Hint Published Each Month



1. Control Wire Lock

by Geo. Favinger
State Roads Commission, Easton, Md.

One of our trucks came in with the choke control wire lock missing and we didn't have the proper part to install.

I thought of using a brass end off a spark plug connection, and it works fine. I drilled a $\frac{5}{64}$-in. hole through the plug cap so the control wire can be placed through it. I found an $\frac{8}{32}$ screw to fit to the cap, and the result is a lock which is as good as the original.

This idea will work in an emergency for hand throttle controls as well.

2. Valve Fixture

by Granville Layne
J. D. Allen Co., Hampton, Va.

Here's a fixture for installing hydraulic valve assemblies without taking off the cylinder head. It takes the place of screw drivers or your own fingers in holding down the valve stems when you put back the hydraulic assembly.

Since these assemblies vary in length and valve position, the shop will have to make up a finger to fit the unit.

The finger is made of spring steel $\frac{1}{32}$-in. thick. It is reinforced at the grip to $\frac{1}{16}$ in. with another steel plate. The handle can be made to suit the convenience of the operator.

In use, turn the engine until cam flats are up. Insert the fingers between end of valve stem and hydraulic lifters and push assembly in place.

3. Balancer Tool

by Thomas E. Davis
Barbara Ann Baking Co.
Los Angeles, Cal.

Here is a sketch of a tool to drive on harmonic balancers for Chevrolets. This is used to hold the device together and as a jig to drive it on as well. With this tool the balancer will not become damaged in assembly.

This jig is made from a piece of 1-in. square iron stock 6 in. long. To this is welded two pieces of round stock 1 x 1 in., located in a spot to correspond to the holes in the balancer. A 3-in. length of 1-in. round stock is welded to the top of the body as shown. Then $\frac{3}{8}$-in. holes are drilled through the two projections to take cap screws.

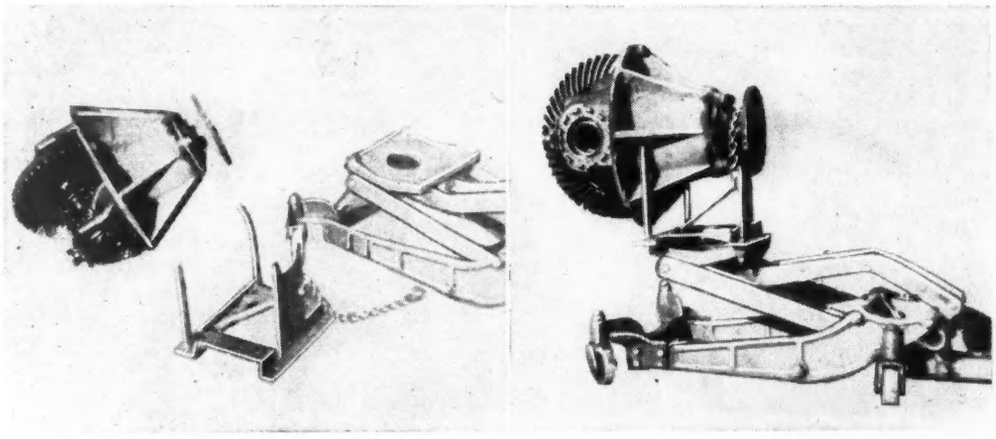
4. Master Cylinder Tip

by Howard L. Kline
Beth-Allen Sales Co.
Allentown, Pa.

The enclosed sketch represents a snap ring used on the WA model White trucks with hydraulic master cylinders. There is no tool available

$5 ***For All Hints Published Each Month***

Readers' demand for shop hints is great. Our price is good. Your chance of winning is excellent. So let's get together. What have you got to sell? A home-made tool—a new way to remove or install an assembly—a shop designed gadget of any description? Pick up a pencil the next time you take a smoke and jot down some notes for these pages. It may mean $5 or even $25 in your pocket.



Home Made Differential Carrier

by R. H. Vermillion

Colorado Springs Transit Co., Colorado Springs, Col.

$25 HINT OF THE MONTH

Here are two pictures of a differential carrier I made to handle heavy transmissions and differential assemblies. With this type carrier all of the bolts may be removed or replaced while the unit is supported on the jack. It makes the job safer and easier.

The carrier unit is made of ¼-in. plate 5 x 10 in. for the front support. Holes are drilled in the sides and a tire chain cross link used to hold the assembly in place. This piece is welded to a base made from angle irons tied together with heavy strap iron. This is drilled at the corners to take studs which hold it to a conventional floor jack.

The back legs are made from two 1-in. rods ten in. long. These are welded to the base as shown. One of these legs is drilled and tapped for a ½-in. stud that serves as a leveler to line up the bolt holes in the differential housing.

to remove this ring, although there are holes in it to aid in the disassembly of the unit.

I simplify the job of removing the ring by grinding off the edges as shown with the dotted line. This enables the mechanic to remove the ring easily the next time by simply prying at the ends.

5. Muffler Tip

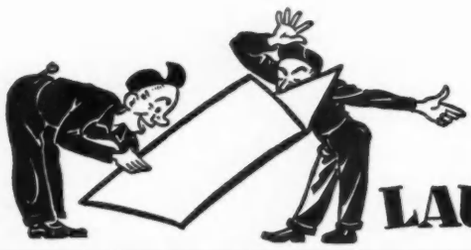
by Tim Vahle

Iowa Ordnance Plant, Burlington, Iowa

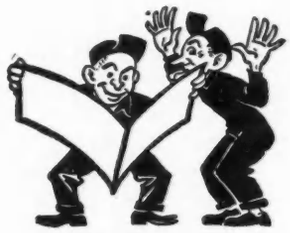
The Willys and Ford Jeeps are equipped with a 2 ft. piece of flexible tubing at the exhaust pipe which breaks a lot.

To overcome this trouble I take a piece of 24 gage galvanized iron 1½ in. wide and 2 in. longer than the flexible pipe. I clamp one end to the solid pipe just under the manifold with a hose clamp and run it along the flexible pipe to the solid pipe under the muffler. Here it is clamped with another hose clamp.

This takes out the slap and noise and puts an end to replacement.



LAUGH IT OFF



The widow of the truck mechanic was attending a seance being held by a spiritualist. Suddenly, the spiritualist said, "Quiet, quiet, I have a message from your departed husband. He asks that you send him a package of cigarettes."

"Where shall I send them," the widow queried. "Did he give an address?"

"Well," said the spiritualist, "you notice he didn't ask for matches."

CCJ

Lolly Paloosa says that a house detective is always at the peek of his profession.

CCJ

The maintenance superintendent had a small son, Peter, aged six, who was a profanity addict, a fact which made his mother very unhappy. One day he received an invitation to a playmate's party. As he left the house his mother said, "Peter, I've asked Mrs. Brown to send you home the very minute you use one bad word."

A short time later Peter was back home, and his angry mother sent him to bed without listening to his attempted explanations. Later, she softened and went into his bedroom. Sitting on the bed she inqutred, "Tell me the truth, Peter. Just what did you say that caused Mrs. Brown to send you home?"

"Say? Say, hell! I didn't say anything. That damn party ain't 'til tomorrow."

CCJ

"Now," the woman lecturer thundered, "if there is any man in this audience who would allow his wife to be slandered and do nothing, let him stand up."

A Wallace Wimple type of character rose.

The lecturer glared at him. "Do you mean to say you would let your wife be slandered without doing a thing?"

"Oh, I'm sorry," the little man replied. "I thought you said slaughtered."

CCJ

The freight claim agent had just relaxed with the papers after a trying day at the office, when little Johnny came rushing in and told him he had just seen three lions fighting in the street.

After several futile attempts to get Johnny to change the story, the Claim Agent finally said, "Johnny, you know you are fibbing and I want you to kneel down and ask forgiveness from God."

When Johnny had finished his prayer, his father asked him what God had said. "He said, 'That's all right, Johnny'," the boy replied, "'Those big dogs had me fooled at first, too'."

Traffic Mgr's Wife: "You just can't trust anybody nowadays. Why, my own grocer gave us a phony quarter in change this morning."

Traffic Manager: "Let's see it."

Wife: "Oh, I haven't got it any more; I gave it to the milk man."

CCJ

The secretary to the tank fleet operator was vacationing for a few days with her parents, who were hill country farmers. Her mother took advantage of the visit to get some assistance in doing the annual dry cleaning. After finishing the task, they poured the dirty gasoline cleaning fluid in the old "three holer" behind the lilac bushes. After supper, Paw went out to smoke and meditate, but he made the mistake of throwing the lighted match down one of the holes instead of out the door. The place blew apart with a terrific bang and Paw dashed staggering toward the house.

"What happened, Paw?" exclaimed Maw, excitedly, as she rushed to the door.

"Don't know 'xactly," gasped Paw, "musta been somethin' I et."

CCJ

Catty Cora, our Office cut-up, says a bride should be well-groomed on her honeymoon.

"It has a good psychological effect!"

Interviewer: "What made you a multi-millionaire?"

Rich Trucker: "My wife."

Interviewer: "Ah, her loyal help."

Rich Trucker: "No, no. I was simply curious to know if there was any income she couldn't live beyond."

CCJ

The constable in a country town was also a veterinarian. One night the telephone rang, and the constable's wife answered. "Is Mr. Jenkins there?" asked an agitated voice.

"Do you want my husband in his capacity as constable or veterinarian?"

"Both, madame," came the reply. "We can't get our dog's mouth open, and there's a burglar in it."

CCJ

Little Johnny brought home his report card, and with it was a note from the teacher. "Dear Mrs. Jones:" said the note. "Johnny is a bright boy, but he spends all his time with the girls. I'm trying to think up a way to cure him."

Mrs. Jones studied the note, then wrote the teacher as follows: "Dear Miss Smith: If you find a way to cure him, please let me know. I'm having the same trouble with his old man."

CCJ

A motor transportation committee was being entertained by a business woman in a French restaurant, and not wishing to be obvious about paying the check the lady whispered to her waiter when the meal was over, "L'addition, s'il vous plait."

"Downstairs to your left, lady," he replied.

CCJ

Lil: "That new bill clerk geesed me as I was stooping at the water fountain."

Mil: "You mean goosed you."

Lil: "No, I mean geesed me—he used two fingers."

CCJ

The teency-weencies were discussing their arrival on this planet.

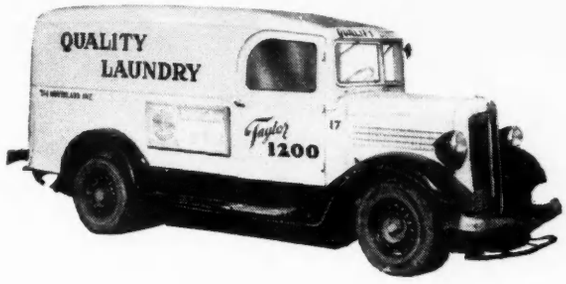
One said the doctor brought him, another that his mother bought him at a shop. One little girl said modestly: "My mother was too poor to buy me; I was home-made."

CCJ

Safety Sadie says: "Many a tombstone is carved by chiseling in traffic."

Resume Work

AMONG THE 105 TRUCKS in the fleet of Buffalo General Laundries Corp.'s Quality Branch are 29 Stewarts, Models 40H and 40HC, ranging in year of manufacture from 1935 to 1937. They are standard ½-ton panel deliveries and most of them have from 150,000 to 200,000 miles.



LAUNDRY Modernizes its 1936 Stewarts

Result: Low-priced, double-capacity trucks with new look and low operating costs

by BART RAWSON
Associate Editor, Commercial Car Journal

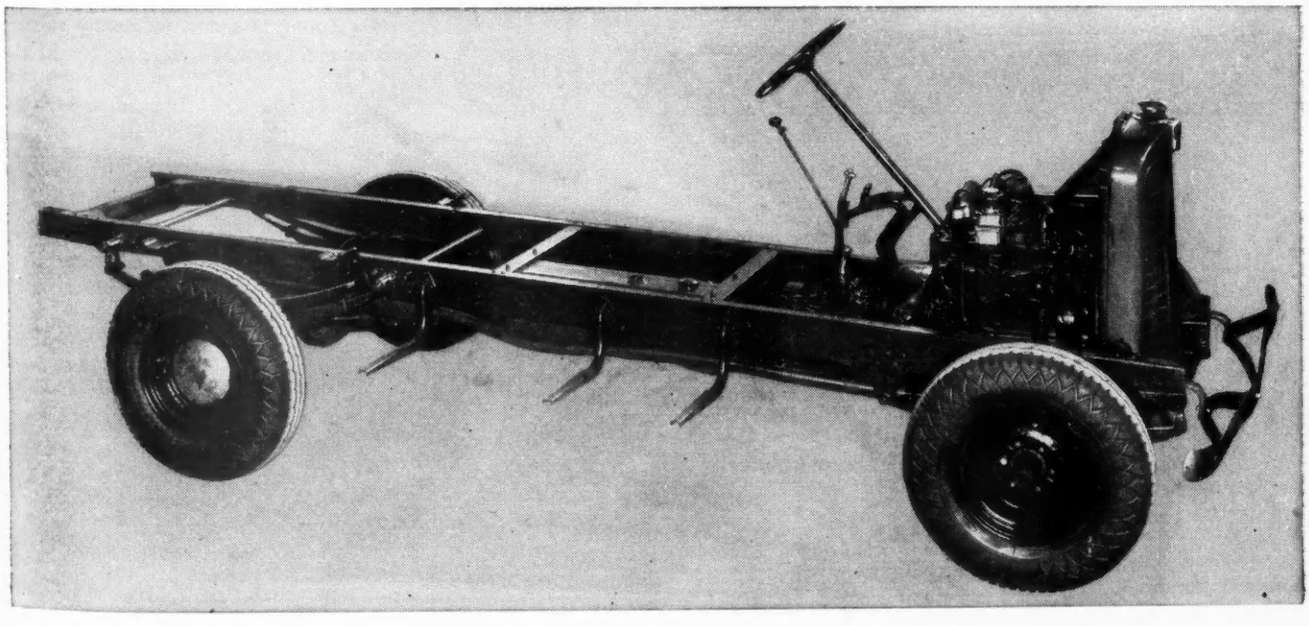
Normally such a group of vehicles would be ready for the junk heap, or at least ready for very low-value trade-ins. They have served a useful, efficient life cycle, and all have been written off the depreciation books several years ago.

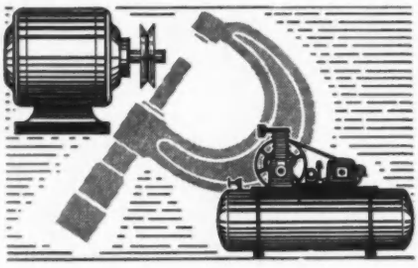
But before disposing of them, General Laundries made a careful appraisal of these vehicles comparing them, item for item, with new equipment. Here is what they found:

The trucks have two types of four-

(TURN TO PAGE 146, PLEASE)

Veteran truck with 200,000 miles is shown at top of page. Completely rebuilt new look version is shown at right. Below is rebuilt chassis ready for new body. Overhaul includes all major components, springs and shackles, front end, even pedal shafts.





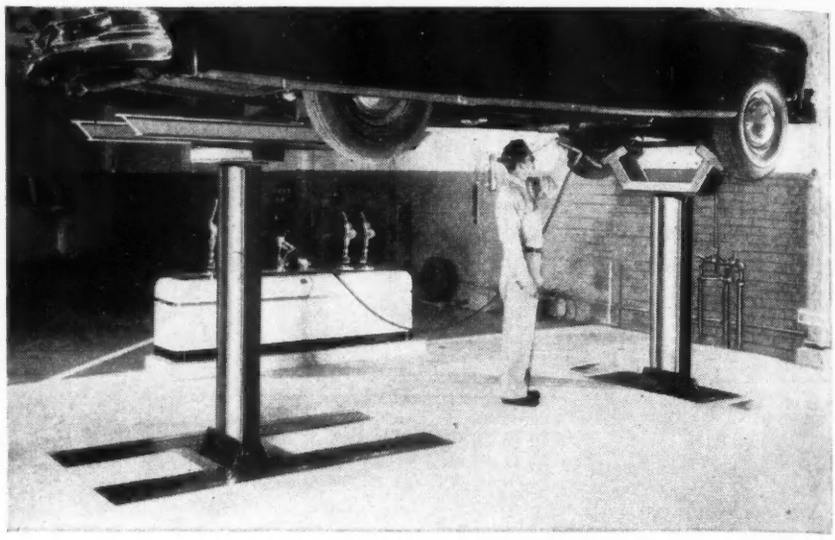
Precision Tools for The Modern Shop

The fourth of a series of articles on selecting, using and servicing power hand tools and shop equipment. In previous issues:

No. 1. Selecting Electric Tools
No. 2. Selecting Air-Powered Tools
No. 3. Servicing Hand Powered Tools

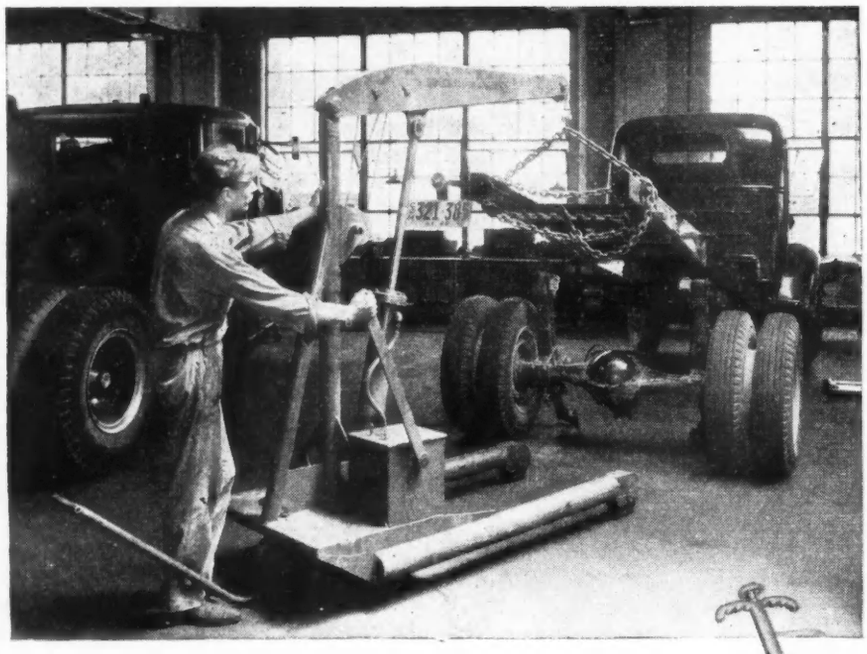
To follow:

No. 5. Maintenance of Shop Equipment
No. 6. Care and Use of Hand Tools
No. 7. Precision Measuring Instruments
No. 8. Air Compressors—Selection and Service



The Joyce-Cridland two-post lift. Such units cut servicing time up to 30%

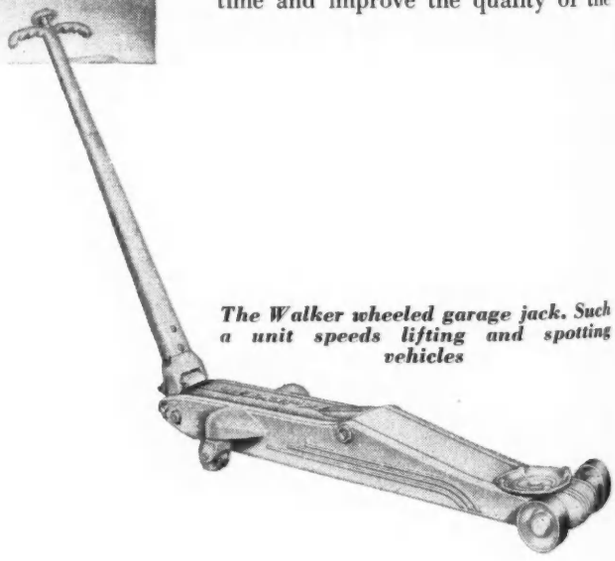
The Ruger portable floor crane speeds service and saves heavy manual lifting



SELECTING

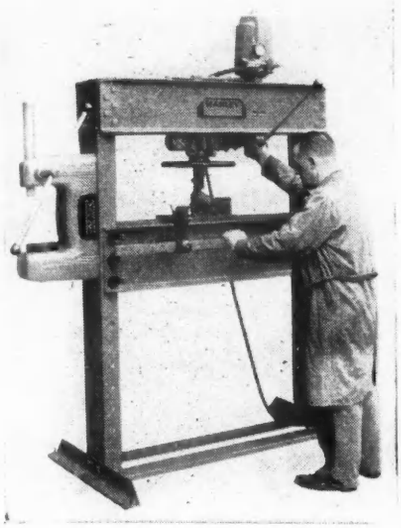
IT'S A FAR CRY from the days of hand work to these modern times, with precision power equipment economically available for every job. But similar progress has been made in the design and operation of existing power equipment so that operators can be assured of reliable, accurate and long-lived tools designed expressly to save time and improve the quality of the

Illustrating and describing available equipment in presses, lifts, jacks, pullers, rams and tire spreaders

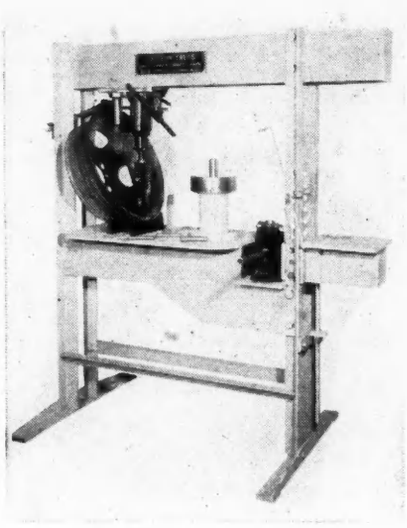


The Walker wheeled garage jack. Such a unit speeds lifting and spotting vehicles

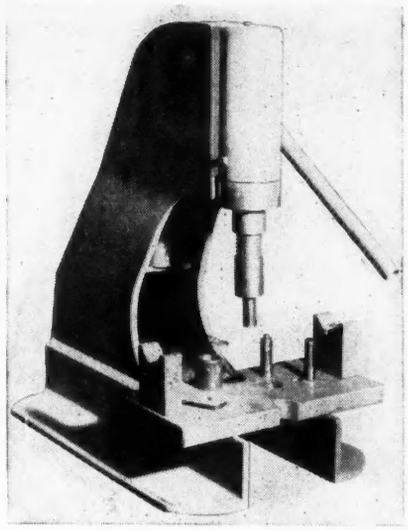
by M. K. SIMKINS
Technical Editor
Commercial Car Journal



The Manley 60-ton floor press with a small arbor press for every shop job



The Tripp wheel straightening press with jigs and fixtures for alignment



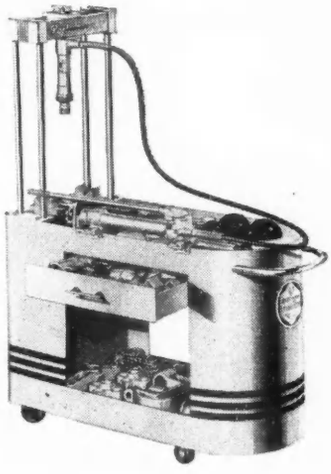
The Ranger 10-ton arbor press for starter-generator, bearing, pulley work

Hydraulic-Powered

SHOP EQUIPMENT

work. Without such tools, no shop can expect to keep ahead of rising labor and maintenance costs.

Surprisingly enough, the cost of original equipment is less today than it was ten years ago — considering such factors as precision, improved versatility and efficiency. Power shop equipment is still a cheap investment when one considers the time saved, the improved work output, the resultant reduced maintenance and the variety of work which can be done by simply pushing a button or pulling a lever.



The Blackhawk Porto-Power ram with bench for all types of body repair

Hydraulic power is fast becoming the workhorse of the modern shop. Today there is a hydraulic tool for nearly every job. Advantages of this type of power have sold such equipment to fleetmen. Users of hydraulic tools will bear out these claims:

1. Hydraulic power is fast, yet smooth and steady, assuring even forces for pushing and pulling, safe power for lifting and ramming.
2. It is accurately controlled, resulting in precision work.
3. It is easy to use, requiring only a simple switch either hand or foot-operated.
4. It is powerful, a small light weight tool producing tons of pressure.
5. It is dependable. Being simple in design, there are few moving parts. Parts are fully enclosed so that dirt has a hard time finding a place to do any damage. Periodic inspection and replacement of hydraulic fluid is about the only maintenance required.
6. Being long lived, it is economical to buy and to use. Used properly, hydraulic equipment will last a long time. Since the power of the mechanic's arm is multiplied by the diameter of the pistons, in many types of equipment there is practically no operating costs. With air-operated types, power is economically supplied with the shop's regular air line.
7. It is versatile. Many tools are designed for a variety of uses, efficiency being limited only by the ingenuity of the operator in locating and manipulating the equipment.

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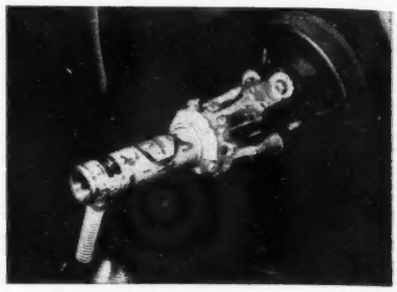
Hydraulic-Powered Shop Equipment

(Continued from Page 51)



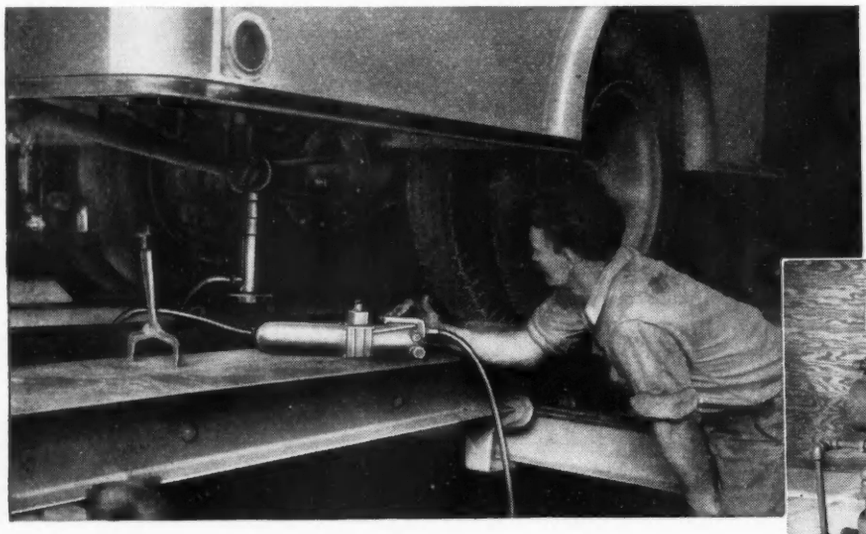
The versatile Porto-Power unit used as a wheel puller to speed maintenance

Hydraulic bench vise designed by Production Devices, Inc., for many jobs

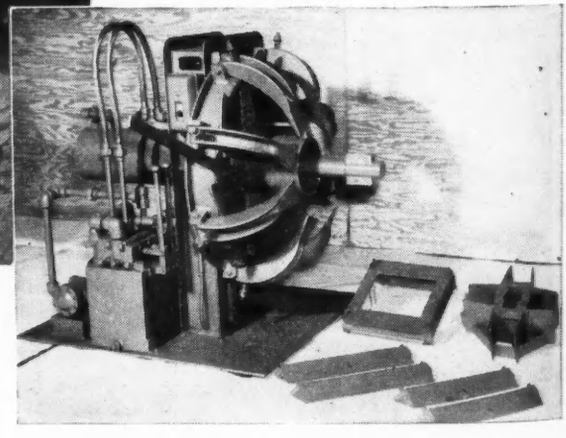
Tire demounters, such as the Lee unit, are quicker, safer and cut tube damage

8. It is safe to use. There is practically no danger of injury on the part of the operator who uses caution and observes the same precautions he would with mechanical equipment.

In these days of high labor costs fleetmen should look into the possibilities of increasing output with more hydraulic power equipment. While time studies have not been completed in all phases of the work, it is safe to say that power equipment will do nearly every job which can be performed by hand—better—and will cut the time from 10 to 90 per cent depending upon the type of work and the efficiency of the operator.

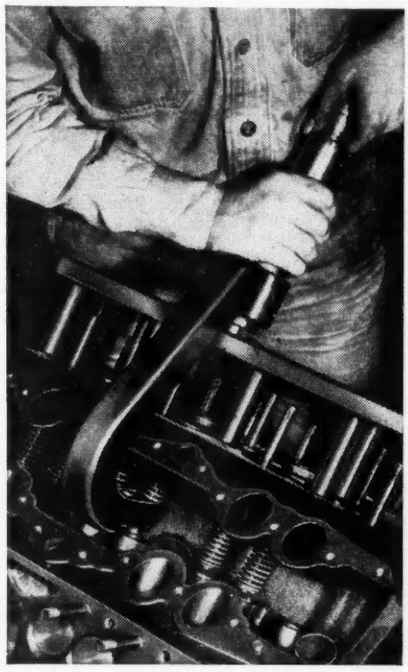


The Chicago-Pneumatic 20-ton jack used in straightening a truck rear axle housing

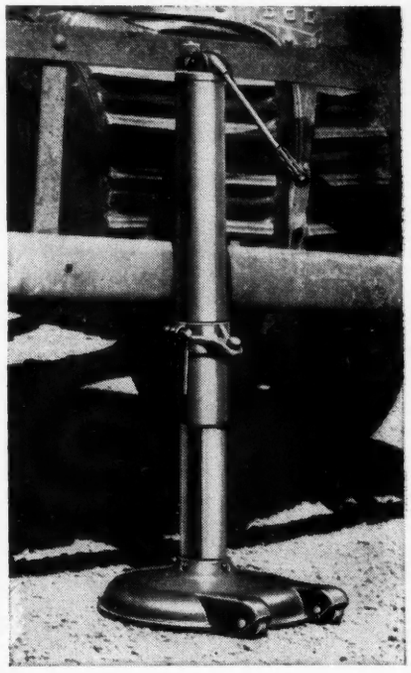


Right, for heavier work the mounted Lee tire demounter saves time and labor

The Chicago-Pneumatic sleeve puller for installing, removing Ford sleeves



The Chicago-Pneumatic valve guide puller for removing Ford V-8 valves



The bumper Blackhawk jack designed for light vehicles in road or shop work

Here's where hydraulic powered equipment excells in the modern shop:

FOR STATIONARY LIFTING—in the form of single and twin post lifts, car rocking jacks, remote control jacks, hoists and cranes.

FOR PORTABLE LIFTING—in the form of floor jacks, wheeled garage jacks, pit hoists and shop cranes.

FOR PRESSING—in the form of 60, 40 and 25-ton floor presses, 10-ton arbor presses wheel and axle straightening presses and pin installing units.

FOR PULLING—in the form of wheel pullers, bearing pullers, sleeve pullers, valve and guide pullers, cylinder head and shackle pin pullers.

FOR HOLDING—in the form of bench vises, piston vises, pin vises, portable clamps for body work.

FOR BODY WORK—in the form of complete units for straightening bodies, fenders, frames, axles, wheels and every other spot on a vehicle which may become damaged in an accident.

FOR TIRE WORK—in the form of tire spreaders, either hand or pedestal mounted, tire removers and holding fixtures.

Choosing a Lift

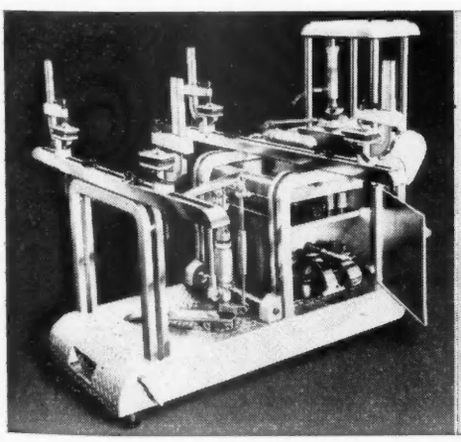
IN choosing a hydraulic lift it is first necessary to establish the type of hoist superstructure that will best suit the fleet's specific requirements. Then

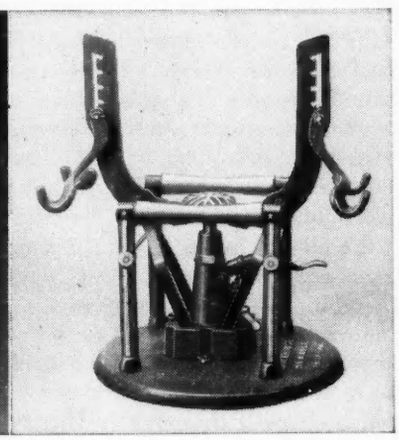
(TURN TO PAGE 124, PLEASE)

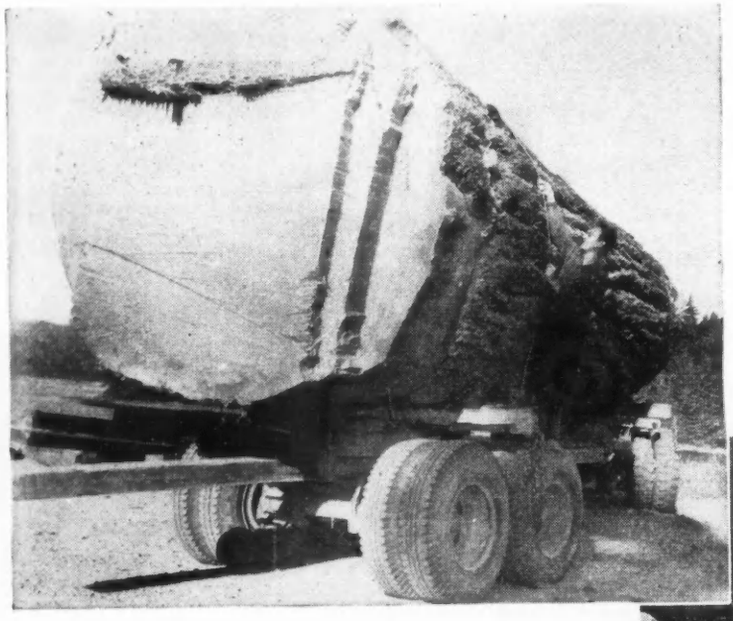
BELOW LEFT. The Porter-Ferguson unit for complete body & fender work

BELOW CENTER. The Stackhouse tire spreaded will handle all sizes of tires

RIGHT. Chicago-Pneumatic's body ram for a variety of body work

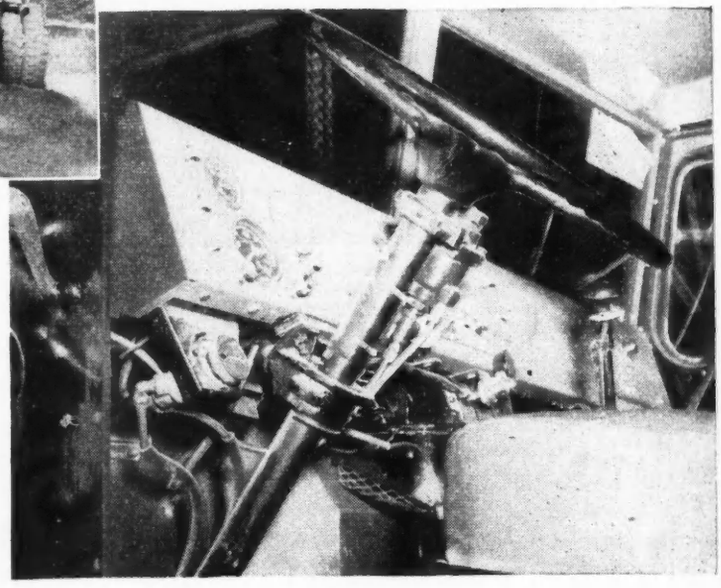






LEFT—A routine job for Clark Logging Co. But remember it has to roll on dusty, very steep mountain trails

BELOW—Front brake control (with arrow and brake-away control button are visible at left, heater unit at right



by EDWIN FREEMAN

**Maintenance Supt., G. H. Clark Logging Co.
Eugene, Oregon**

OFF-HIGHWAY LOGGER Licks

IN OUR OFF-HIGHWAY operations, hauling giant logs along wood trails to the dump, the biggest maintenance problem is DUST!

Ten of our 18 trucks are used in this type of service. Of these four are diesel, the balance gasoline. All our 18 wheelers hauling from 35,000 to 50,000 lb.

Every truck is equipped with heavy-duty air filters or "breathers." These must be cleaned and serviced at least three times a week. On units which are used only on paved highways, we service and clean filters once a month.

Air filter service requires 30 minutes, or an hour and a half a week. It includes removing the cleaner, washing it in solvent, replacing, and a refill with clean oil.

Brake system filters must be checked twice weekly and replaced each six months. It requires 15 minutes to make the brake filter check.

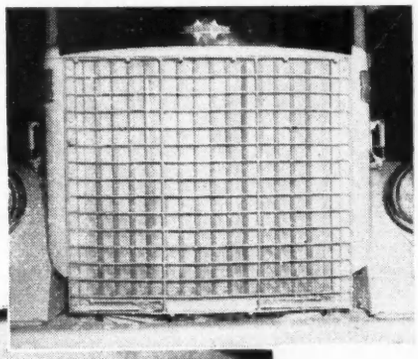
On off-highway hauling we have 100 per cent more trouble with the dust fight. We have a dust condition in the oil not found where the same trucks are used on regular highways. On off-highway units we change the oil three times as often as we do on the other units. At each oil change the motor is flushed out and the oil system checked thoroughly. This requires approximately 30 minutes. Oil is changed twice each week.

Air compressor filters must be removed, washed in solvent, refilled and replaced every other day. This requires from 10 to 30 minutes. When this is not done every other day we find trouble with brake valve sticking or developing a leak. In one such instance it caused a runaway.

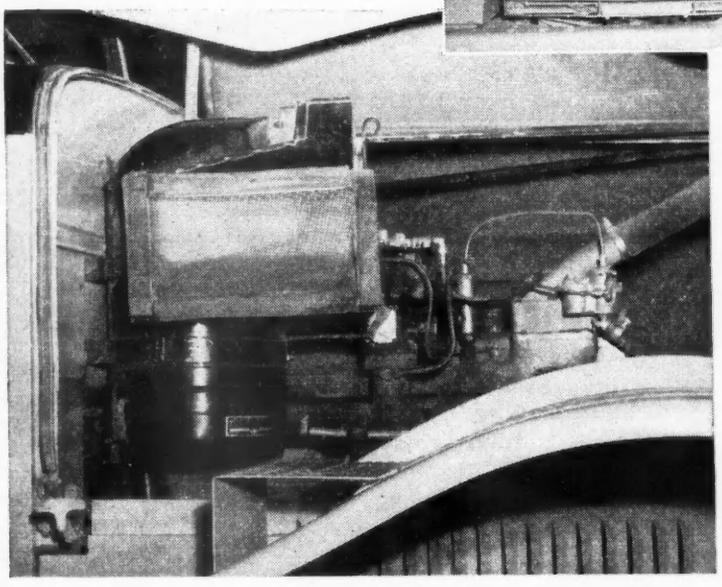
Twice each month each off-the-highway unit is steam cleaned to remove the grease and pitch. We use a special commercial chemical in our cleaner which removes the pitch. This steam cleaning requires three hours.

The motor is steam cleaned weekly

RIGHT—Automatic shutters hold engine heat within 20 deg limit. Without them, heat would fluctuate 60 deg



BELOW—All trucks are equipped with heavy-duty air filter which must be serviced at least three times a week



the Dust Bogey

Special filters, daily lubes and ultra-frequent checks help keep out dust and are key factors in reducing accidents

before it is inspected and given the weekly tune-up. This steam cleaning requires 20 minutes.

Both trucks and trailers in off-highway service are lubricated each day. On-the-highway units are lubricated but once a week. The job takes two hours.

Weekly and Monthly PM

BECAUSE of our unusual operating conditions, mileage is of little importance in our preventive maintenance schedules. It's the days or even hours of operation that count. Even for figuring operating costs mileage is relatively unimportant for we base our calculations on number of board feet hauled.

Each night when the driver brings his truck to the garage, he is required to report to the shop foreman on the truck's condition. The foreman keeps a notebook with a page for each truck. As the drivers report in, all "cries" are written in the book. Those which require immediate attention are handled before the truck goes out in the morning. Others are held for the weekly PM check. During the night, each unit is checked daily for: Tires, brakes (particularly the brake cams, linings and drums), and in the winter the lights are checked before the truck leaves in the morning.
through the two projections to take

While our tune-up schedule calls for a complete tune-up each 30 days, we give a minor tune-up weekly. This includes: Checking plugs, points, wiring, reset valves, check fuel pump, clean fuel pump screen, and check water system and shutters (all of our trucks are equipped with thermostat controlled shutters for motor temperature control).

The monthly tune-up covers the same as above, except we put over from the weekly tune-up all adjustments and service which can safely be handled monthly. The monthly tune-up requires 2 hours.

Major Overhauls

ON off-the-highway units, major overhauls are required more often. It will average 15 months between major overhauls here. We are running two years between major overhauls on our on-the-highway units.

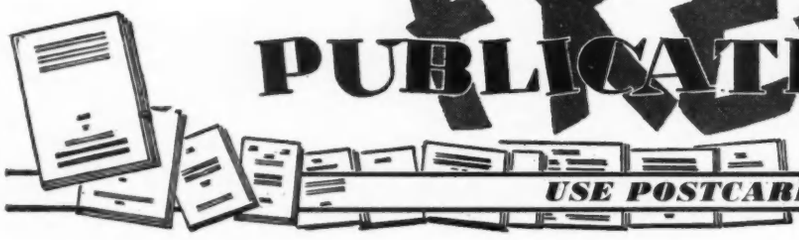
Taking the last three diesel engine major overhauls, the total labor and replacement parts cost averaged $1087.20 per job. The breakdown on this shows $386.95 for labor and $700.25 for parts and replacements.

On six gas engine major overhauls, total overhaul cost averaged $477.40; with the labor-parts ratio 40/60, in that order, labor averaging per unit $190.

This may seem like a high major overhaul cost, but considering that our gas units cost us new $17,000, and

(TURN TO PAGE 141, PLEASE)

FREE PUBLICATIONS



USE POSTCARD—NO STAMP NEEDED

A selected list of the latest literature—catalogs, pamphlets, charts—chosen to help fleetmen improve operation and maintenance

L171. Cleaning Booklet

A new booklet, "How to Cut Automotive Cleaning Time and Costs," contains suggestions as to methods, materials and equipment for all types of automotive cleaning.

Departmental cleaning problems are segregated so that the booklet will be of interest to fleet and bus operators, service managers and car dealers alike. Subjects covered include engine and chassis cleaning; rust and scale removal; body washing and care; preparation for painting and paint removal; and general shop and building maintenance.

A free copy is available by writing L171 on the accompanying postcard.

L172. Welding Data

A new 8-page bulletin, containing more than 60 illustrations, explains in simple non-technical language, how Eutectic Low Temperature Welding Alloys compare with welding and brazing processes.

The issue is devoted to explaining how 15 of the most popular Eutectic alloys can save defective equipment and machinery, and how the process of low heat welding is used to most advantage in construction work and fabrication.

The information given is unusually complete since it stresses properties of the low heat alloys, how they compare with and excel other techniques, and gives examples and detailed instructions for their use.

Stressing various methods of eliminating the usual welding headaches of distortion, stress, high temperature defects, the bulletin offers every plant and shop an opportunity to select the rod designed specifically for their particular welding problem, whether it is cast iron, stainless, steel, aluminum, copper, brass, bronze, etc.

Write L172 on the free postcard for a copy of this valuable data.

L173. Hydrovac Data

A sectional drawing of a Hydrovac power brake mounted on heavy cardboard and showing the operation of the brake is now available for shop instruction material. The device is so constructed that by moving a lever (the brake pedal) the pistons and valves are made to work in exactly the same relations as in the Hydrovac itself.

The ⅛ in. cardboard with cutaway sections to show operation, demonstrates an action that is not easily understood from ordinary textbooks. The actual cycle of parts movements as each action takes place should provide a better understanding of the mechanism to mechanics, drivers and fleetmen. It should become a valuable training aid for fleets. Just write L173 on the free postcard and secure this handy device for your files.

L174. Mechanic Training

A new 20-page illustrated booklet outlining opportunities for men in the automotive business has been made available to the trade. The booklet points out that skilled auto mechanics are much in demand, that this training is valuable as a basis for other careers, that the mechanic can do what many in other fields cannot do—"work with their heads as well as their hands."

The competent, ambitious mechanic, according to the booklet, can graduate to such positions as shop foreman, parts manager, service manager, jobber salesman, factory service instructor or a repair shop owner.

Just write L174 on the accompanying postcard.

L175. Ignition Facts

A booklet entitled "Facts About Ignition" has been made available to the fleet field in the interest of better ignition service. Featuring some new valuable facts on the design and maintenance of the contact points, this booklet will provide practical background to the mechanic.

The author states that all the contact failures are found within the contacts themselves. He lists such causes of failure as high voltage, faulty condenser, improper ignition coil, filed tungsten, dirt and oxidation etc. Illustrations with carefully prepared text show the reason for these failures.

In troubles originating with the points themselves, the author shows three types of surfaces and the reasons for their contribution to shortened contact life. He shows how contact point springs as well as conductivity of the metal determine the life and serviceability of the points.

Write L151 on the free postcard and add this maintenance guide to your files.

"Can't You Read?"

NEW PRODUCTS

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The newest in replacement parts, accessories, shop equipment, supplies—illustrated and described in brief for the fleetman

P200. New Plier Set

A new small plier set No. 14 has been announced by the Bonney Forge and Tool Works, Allentown, Penna.

All three pliers are 4 in. in length, designed particularly for ignition, starter, generator, carburetor and instrument work.

The set consists of one flat nose plier, one short chain nose plier and one diagonal cutting plier and they come in a handy leatherette kit.

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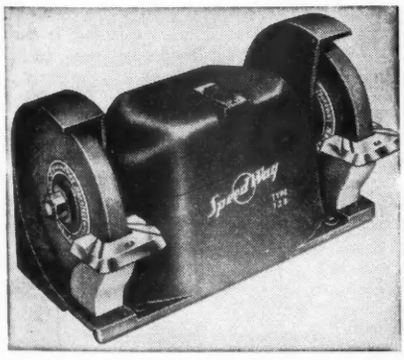
P201. Bench Grinder

The new Speed Way electric grinder developed by Speedway Mfg. Co., Cicero, Ill., features a ¼-hp motor with industrial



size grinding wheels of 6 x ¾ in. Tool rests are fully adjustable to compensate for wheel wear and have built-in guides of pre-set angles that simplify the grinding of tools. Bearings are self-aligning, impregnated oil-less, providing for 2½-in. bearing surface. Rubber grommets provide shock absorbing feet and for permanent vibration-free mounting to the bench. The housing is of all-cast aluminum.

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P202. Grizzly Brake Fluid

A new hydraulic brake fluid, compounded to meet SAE Standards for moderate duty type, and possessing an effective operating range from 300 deg F to minus 80 deg F, is now offered by Grizzly Mfg. Co., Paulding, Ohio.

Called Grizzly Excelo Hydraulic Brake Fluid, it is also claimed by the manufacturer to mix completely with other approved brake fluids; to be non-foaming and to have no harmful effects upon metal or rubber parts.

The brake fluid is available in 5, 15, 30 and 54-gal drums as well as in pint, quart and gallon lithographed cans.

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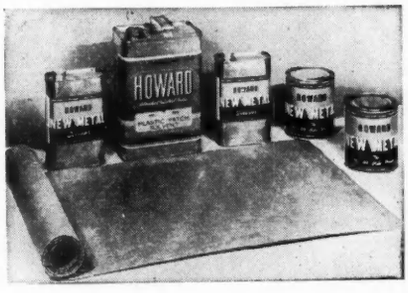
P203. Plastic Patch

A plastic patch is being introduced to body repair shops by Howard Paint Division of Reconditioning Products, Inc., Cleveland, Ohio, as a fast simple inexpensive method of repairing torn, rusted out sections on automobile and truck bodies and fenders without the need of skilled labor.

Plastic patch is sold in three units depending upon the thickness of the patch required. Each unit consists of ample plastic patching material, plastic patch solvent, Howard new metal and Howard's new metal solvent.



Application of plastic patch is done in three basic steps . . . preparation of surface, smoothing out plastic patch material over damaged area and spraying or brushing Howard new metal over patch for sanding or grinding to a smooth feather edge to take any finish.

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P204. Tank Cleaner

Turco Transpo, a new, non-inflammable, non-corrosive, fast-acting, long-lived cold tank material for the removal of carbon, sludge, grease and paint is offered by Turco Products of Los Angeles, Chicago and Houston.

Said to be freer rinsing, Transpo is a two-layer material comprised of a floating chemical seal and a lower layer of potent cleaning agents. Designed to provide peak efficiency at room temperature, there is no need for agitation or heating to maintain its peak the year round.

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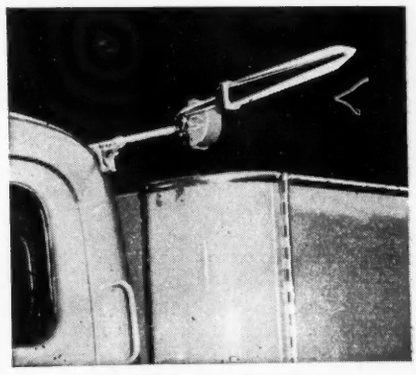
P205. Vacuum Signal

A vacuum-operated truck and trailer signal has been developed by the Vac-O-Lite Signal Co., Inc., Seattle, Wash.

Illuminated along its full length, this arm is immediately discernable either day or night under normal weather conditions at a distance of 500 ft. There is no mechanical linkage between truck and van or trailer.



Constructed of only five basic parts, including the complete motor assembly, this signal arm is said to be positive in action and position. It is easily operated by "fingertip" contact from the steering column, and has a pilot light indicating when arm is in signaling position.

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P206. New Solvent

A new, liquid, aromatic concentrate has been developed by The Curran Corp., Lawrence, Mass.

According to the laboratory, the new solvent is especially adapted for use in recirculating solvent cleaning machines for

(TURN TO NEXT PAGE PLEASE)

NEW PRODUCTS

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(Continued from Page 57)

degreasing automotive parts, etc., since the new, liquid, aromatic concentrate may be added to common, ordinary mineral spirits Commercial Standard CS-3-38 (Stoddard solvent)—available at very low cost at all major oil company bulk plants.

It is stated the addition of 5 gal of the new concentrate to a 50-gal drum of mineral spirits results in a highly penetrating mobile solvent with a quick rate of evaporation.

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P207. Stock Preserver

The new Willard stock preserver developed by Willard Storage Battery Co., Cleveland, Ohio, is said to be ideal for maintaining supplies of storage batteries in peak condition.

This charger eliminates the burden of rotating, stocks, checking, recharging and flushing to keep batteries ready for instant use.

The stock preserver automatically maintains stocks of batteries at fully-charged peak efficiency. One stock preserver can maintain up to 50 six-volt batteries in peak condition, or 25 twelve-volt batteries.

Use Free Postcard for More Details.

P208. Cement Products

The development of three new gasket cements plus a weatherstripping cement, and a trim cement, for use on various applications in the automotive and allied fields, has recently been announced by Park Chemical Co., Detroit, Mich.

Parko Gasket Cement No. 1 is a hardening type cement said to be fast drying and hard setting for use in making permanent assemblies, building up uneven or warped surfaces, and repairing broken parts. Gasket Cement No. 2 is a non-hardening type which dries slowly and remains pliable for general assembly work. The third new gasket cement is an aviation type said to be easily applied with a brush to produce a tough, elastic non-hardening seal resistant to pressure and shock, and leak-proof to gasoline, oil, anti-freeze and other automotive liquids. Its stated effective temperature range is from 50 deg F to 400 deg F.

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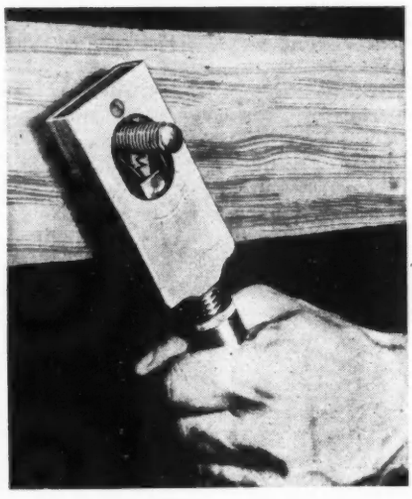
P209. Thread Cleaner

A new type thread cleaner has been announced by the Buckingham Mfg. Co., Inc., Binghamton, N. Y. This tool cleans and quickly restores flattened, distorted or badly rusted right or left-hand threads on bolts or studs up to $2^{1}\!/_{16}$ in. diameter. Damaged threads of any size or pitch on any type of bolt can be quickly reconditioned so that nuts can be removed or put on with ease.

The thread cleaner is used by slipping it over the bolt, tightening the cutting jaws into the threads, close to the nut, and turning until the threader comes off the bolt. Manufacturer recommends the use of light oil on the work. Threader is easily set



and held to size by a single lock nut on the knurled handle. All working parts are finely machined and hardened.

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P210. Hydraulic Fluid

Socony-Vacuum Oil Co., Inc., has announced the development of Mobilfluid 62 which is an improved hydraulic fluid for use in the torque converters which are finding increased application in buses to provide smooth acceleration and to eliminate gear-shifting.

The new product is described as having high chemical stability and great resistance to oxidation, so that converter parts and the supplementary hydraulic circuit are kept free of deposits despite thousands of miles of service. It is light-bodied, has a good viscosity index and retains its fluidity at temperatures as low as 40 deg below zero.

In addition, Mobilfluid 62 is non-corrosive and is processed to safeguard against rusting and to resist foaming.

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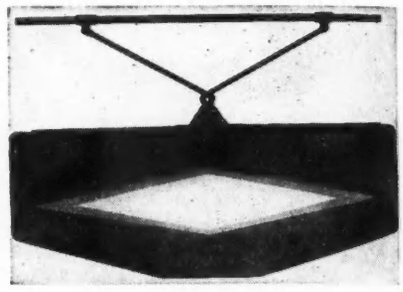
P211. Sun Shade

The Newton GlareKillr, announced by P. S. Newton, Oakland, Calif., is said to enable drivers to drive against bright sun-



light and lights of oncoming cars with excellent vision and without being annoyed by glare.

The device is a plastic plate, tinted with three shades of green-blue dye except for a diamond-shaped clear aperture in the center. The three tints are arranged progressively around this aperture, with the lightest tint nearest the clear space.

The device mounts on an adjustable metal frame in place of the regular sun visor, or may be specially mounted in vehicles which have no sun visors. The mounting is such that the tinted plastic plate may be swung sidewise, raised, lowered or tilted.

Use Free Postcard for More Details.

P212. Hand Grinder

A new utility hand grinder set has just been announced by the K. O. LEL Co., Aberdeen, South Dakota.

Consisting of an electric driver with attachments for using sanding discs, grinding wheels, mounted grinding wheels, and a tool post holder that doubles as an auxiliary handle, it is claimed to have great versatility. The set is packed in a steel box

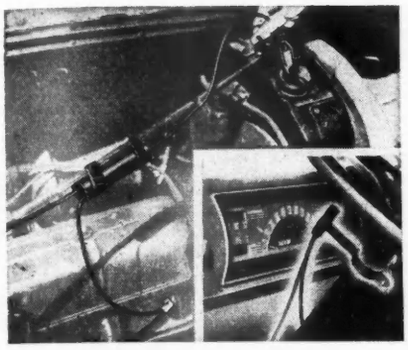
which provides room for everything including a sanding drum attachment that is available as an extra.

Use Free Postcard for More Details.

P213. Low Water Indicator

Lindberg Instrument Co., Berkeley, Calif., has developed an instrument to automatically flash a warning signal to the truck driver when the level of coolant in the radiator drops.

According to the manufacturer, it can be installed in from 5 to 10 min, has no moving parts and requires no maintenance. The slight energy required is taken from



the ignition system, without affecting it in any way. Once installed, the device continues to work indefinitely without attention.

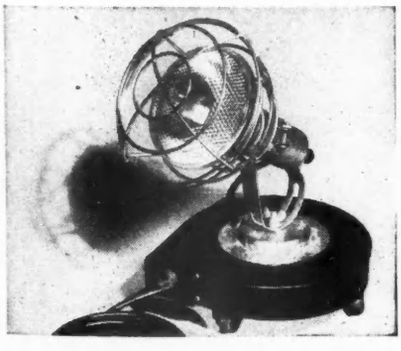
The Lindberg low water indicator gives its warning the instant the coolant level begins to drop, *before* the engine starts to overheat. It is located on the steering post, or some other conspicuous place, and flashes a brilliant red neon light when coolant drops below a predetermined level.

Use Free Postcard for More Details.

P214. Cord Reel

A new model of Benjamin portable extension cord reel equipped with socket and guard is available from Benjamin Reel Products, Inc., Cleveland, Ohio.

This model is equipped with three casters so that it can readily be moved around to focus the light where required. The reel is painted gray and equipped with 20 ft of



SV 18/2 rubber covered cord and a male attachment plug is provided to plug into the wall receptacle. The socket, bracket and guard are cadmium plated.

The reel is equipped with a level-winder arrangement which distributes the 20 ft of cord evenly and stacks it properly in the reel when the cord is retracted.

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P215. Electric Polisher

The Jones Motorola Corp., Stamford, Conn., has developed a new model electric polisher for polishing and cleaning bodies. It can be used on metal, wood, plastics and other surfaces. The light weight, compact unit comes complete with such accessories as a rubber pad, lambs wool bonnet, and a rubber pad retainer screw.

The polisher can be converted into a sander and a drill with accessories which are available at extra cost. As a drill it has ¼-in. capacity, 5-in. sander discs can be used with the unit.

The polisher is 8 in. in length and weighs 5 lb.

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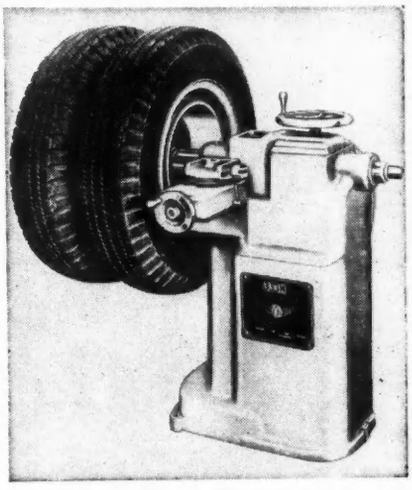
P216. Brake Drum Lathe

A new brake drum lathe has just been announced by Van Norman Co., Springfield, Mass.

No. 333-H Brake Drum Lathe, fourth machine of its type in the Van Norman line, will take drums up to 5 in., with dual wheels. It has 2 feeds, 1½-in. and 1½ per



minute, and 2 speeds, 50 and 100 rpm. Heavy duty grinder attachment is available for use with this machine.

The lathe has the 3-in. hollow spindle which saves set-up time because it not only revolves, but slides in and out, affording easier access to the interior of the drum, and gives the drum more rigid support, the company states.

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P217. Timing Light

F & B Mfg. Co., Chicago, has added to its line the new Filko Flash Timing Light.

A brilliant, blue-white flash with a focused beam clearly shows the timing marks on the flywheel or front balance wheel at all engine speeds. There is a zero time lag between the firing spark and the blue-white flash.

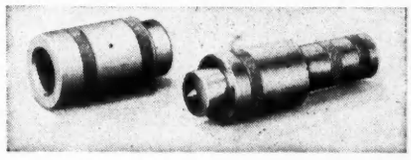
The new light is ruggedly built. The case is molded in oil resistant neoprene for unbreakable, shock-proof service. Correct balance for easy aiming is assured by the pistol grip design. Fast connection is obtained through long, flexible leads with rubber encased alligator clips.

Use Free Postcard for More Details.

P218. Timing Gears Tools

A set of mounting tools for changing timing gears without removing the cam or crankshaft from the engine, is announced by Dexter Machine Products, Inc., Chelsea, Mich.

Emergency conditions frequently develop when these new tools can be used to save



in labor costs and in the tie-up of equipment en route with pay-loads, according to the manufacturer.

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P219. Body Door Lock

The United Mfg. Co., Bedford, Ohio, has developed a new truck body door lock intended for use under extremely rugged conditions.

The upper and lower bolts are *triangular* in shape and are constructed of drop forged steel to give maximum strength where strain is greatest. The universal center case can be used on either right or left hand doors. In either case, the handle swings away from the edge of the door in the open position. Accidental opening of the lock is prevented by a spring mechanism.

The entire unit, including handle weighs 14½ lb. Standard length rods are furnished to accommodate 92-in. doors. Other lengths can be furnished to special order.

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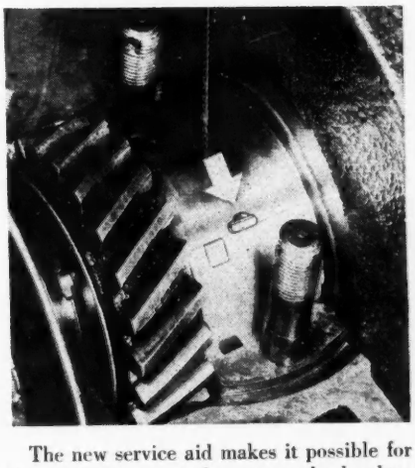
P220. Roll-Out Pins

For the mechanic who has to replace an upper main bearing without removing the shaft, the new "roll-out" pins, produced by Federal-Mogul Service, Coldwater, Mich., go a long way toward simplifying this job.



The new service aid makes it possible for the mechanic to easily remove the hard-to-get-at upper bearing half while the crankshaft is in the engine. It also eliminates dangerous punch-and-hammer or chisel practices, and provides protection for the crankshaft and bearing bore.

To remove the old bearing half, the pin

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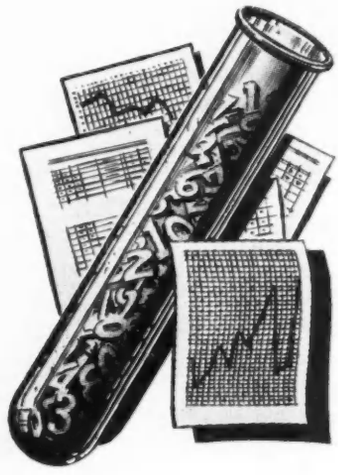

Cost Analysis

Shows the WHY of Cost Changes

Because fleet costs never remain stationary it is imperative to find out what causes the changes. Proper accounting technique can simplify the job

IN EVERY well regulated business the executive is furnished with some periodic cost figures covering the activity of his department. The larger the activity, the greater is the degree of attention required to produce and analyze these figures. Contrawise, careful analysis is more productive in the larger activity.

The executive depends, however, on the cost accountant or the statistician to carefully analyze the figure and present these analyses in as simple a manner as possible. To this end, the graph is, of course, the most useful method.

In an activity containing so many variables as does motor truck operation, it is particularly necessary to provide the manager with informative data. To what extent should data be submitted? In what is he particu-

FIG. 1 (left) shows set of assumed figures set down in normal fashion. Despite the fact that there are only three variables, explanation becomes involved

FIGURE 1 BASIC COST ANALYSIS WITH THREE VARIABLES

	Past Period	Present Period	Difference
Gallons Hauled	8,486,071	10,604,224	2,118,153
Miles Run	122,357	151,913	29,556
No. Avg. Trucks per period (Truck days worked ÷ calendar days)	121.13	138.58	17.45
Gallons per mile	69.355	69.80	
Miles per Truck	1,010.13	1,096.21	

138.58
121.13
17.45 @ 1010.129 = 29,556.00 / 17,626.75 increase in miles due to inc. of No. of trucks (A)

11,929.25 increase in miles due to inc. in miles per truck

17626.75 @ 69.355 = 1,222,502 increase in gal. due to inc. in No. of trucks (B)

11929.25 @ 69.355 = 827,353 increase in gal. due to inc. in No. of miles per truck (D)

29556.00 @ 69.355 = 2,049.855 (C)

151.913 @ 69.355 = 10,604,224 / 10,535,926 (E)

68,298 increase in gal. due to inc. in gals. per mile (F)

EXPLANATION

Difference in No. of cars x past miles per car = Variation in miles due to variation in number of trucks = "A".

"A" x past gal. per mile = Variation in gal. due to variation in No. of trucks = "B".

Difference in miles x past gal. per mile = Total Variation in gallons due to miles = "C".

"C" = "B" + Variation in gal. due to variation in no. of miles = "D".

Present miles x past gal. per mile = "E" (Gallons hauled @ past efficiency).

Present Gallons minus "E" = Variation in gal. due to variation in gal. per mile = "F".

FIG. 2 (right) uses the same figures but rearranged for simplified procedure. Only first six figures are supplied by analyst, the rest by machine operator

FIGURE 2 SAME ANALYSIS REARRANGED FOR MACHINE CALCULATIONS

Scheme				
	1	Gallons Hauled - Former Period	8,486,071	
	2	" " - Present Period	10,604,224	
	3	Miles Run - Former Period	122,357	
	4	" " - Present Period	151,913	
	5	No. Trucks - Former Period	121.13	
	6	" " - Present Period	138.58	
1 ÷ 3	7	Gallons per mile - Former Period	69.355	
2 ÷ 4	8	" " " - Present Period	69.804	
3 ÷ 5	9	Miles per Truck - Former Period	1010.129	
4 ÷ 6	10	" " " - Present Period	1096.211	
2 - 1	11	Difference in Gallons Hauled	2,118,153	
4 - 3	12	Difference in Miles Run	29,556	
6 - 5	13	Difference in No Trucks	17.45	
9 x 13	14	Change in Miles a/c Change in No. Trucks	17,626.75	
12 - 14	15	" " " " " " Miles per Truck	11,929.25	
14 x 7	16	" " Gal a/c " " No. Trucks	1,222,502	B
15 x 7	17	" " " " " " Miles per Trucks	827,353	D
4 x 7	18	Present Gallons at Former Gallons per Mile	10,535,926	
2 - 18	19	Change in Gallons a/c of Change in Gallons per mile	68,298	F
16 + 17 + 19	20	Check for Line 11	2,118,153	
	B	Additional Gallons Hauled because of additional equipment	1,222,502	
	D	" " " " " increasing miles per truck	827,353	
	F	" " " " " " Gals. per mile	68,298	
			2,118,153	

by G. A. SCHWAB

Automotive Accountant
Atlantic Refining Co., Philadelphia

larly interested, and what can be used to the best advantage? How should it be obtained, and how should it be presented? It is not enough to say that cost per mile or cost per ton is going up or down. Of course it is. Costs never remain stationary, but *why do they change?* Is it purely because prices are going up or down or is it because of less efficiency in delivery or in repairs? Or is it a combination of these, and to what extent?

It should be obvious that any running graph indicating the *causes* for changes in costs should be of prime benefit to the automotive manager; first, to save his time in endeavoring to read a mass of figures, second, to give his attention to the adverse factors needing correction, thus avoiding wasted effort on less consequential matters.

It is often overlooked that cost analyses do not have to be absolute or too highly refined to be of considerable value. The choice of what to

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FIGURE 3 ANALYSIS OF TRUCK OPERATION - DELIVERY EXPENSE

			Base Period	1st Period	2nd Period	3rd Period	4th Period	5th Period	6th Period
Base Period	4 ÷ 3 = A	2.19							
Base Period	4 ÷ 1 = B	5.0355							
	2 ÷ 3 = C	8.9555							
	1 ÷ 2 = D	04856							
	1	Tons Hauled	5,807	5,907	5,564	6,223	6,165	6,390	6,331
	2	Miles Run	119,583	108,277	102,872	117,582	120,249	121,493	125,651
	3	Delivery Hours	13,353	13,655	13,176	13,794	13,381	13,419	13,328
	4	Delivery Expense	29,240	40,881	35,451	33,123	33,123	31,220	31,777
	5	Line 3 x A		29,926	28,855	30,209	29,318	29,388	29,188
	6	Line 5 - Line 4		— 10,961	— 6,602	— 2,914	— 3,805	— 1,832	— 2,589
	7	Line 6 ÷ Line 1		— 1.856	— 1.199	— .468	— .617	— .287	— .409
	8	B - Line 7		6.891	6.235	5.504	5.653	5.322	5.444
Price Line	9	Line 8 ÷ B x 100	100.	136.85	123.82	109.30	112.26	105.69	108.12
	10	Line 2 ÷ C		12,091	11,487	13,130	13,427	13,564	14,031
	11	Line 10 - Line 3		— 1,574	— 1,689	— 664	40	141	703
	12	Line 11 x A		— 3,447	— 3,699	— 1,454	88	322	1,540
	13	Line 12 ÷ Line 1		— .584	— .672	— .234	.014	.050	.243
	14	B - Line 13		5.619	5.708	5.269	5.021	4.985	4.992
Speed Line	15	Line 14 ÷ B x 100	100.	111.59	113.35	104.64	99.72	99.00	95.19
	16	Line 2 x D		5,258	4,995	5,710	5,839	5,900	6,102
	17	Line 5 ÷ Line 16		5.692	5.777	5.291	5.021	4.981	4.983
	18	Line 5 ÷ Line 1		5.066	5.243	4.854	4.756	4.899	4.610
	19	Line 17 - Line 18		.625	.534	.436	.266	.382	.173
	20	B - Line 19		4.410	4.501	4.599	4.770	4.604	4.863
Efficiency Line	21	Line 20 ÷ B x 100	100.	87.58	89.39	91.34	94.73	92.41	95.53
	22	Line 4 ÷ Line 1		6.922	6.442	5.323	5.373	4.886	5.019
Average Line	23	Line 22 ÷ B x 100	100.	137.46	127.93	105.70	106.70	97.03	99.68

FIG. 3 is complete worksheet for analyzing delivery expense over a number of different time periods. Lines 1 to 4 are self-explanatory; the remaining lines are described as follows:

Line 5 Present Delivery Expense at Base Price.

Line 6 Difference cause by Price change.

Line 7 Difference per ton due to Price change.

Lines 8 & 9 Chart line for Price. What the actual cost per ton would be relative to Base Period if factors other than Price had remained the same.

Line 10 Delivery Hours which would have been consumed if trucks had run at same Speed as in the Base Period.

Line 11 Difference due to Speed.

Line 12 Difference due to Speed priced at Base Year's Price.

Line 13 Line 12 per ton.

Lines 14 & 15 Chart line of Speed Efficiency. What the actual would be relative to the Base Period if factors other than Speed had remained the same.

Line 16 Tons which would have been hauled at Base Period's rate of tons per Mile.

Line 17 Line 16 at Base Period's Prices.

Line 18 Cost per ton of present tonnage at Present Efficiency and Base Price.

Line 19 Difference in cost between past and present Delivery Efficiencies at Base Prices.

Lines 20 & 21 Chart line of Delivery Efficiency. What the actual would be relative to the Base Period, if factors other than Delivery Efficiency had remained the same.

Lines 22 & 23 Chart line of Actual Cost per ton.

Cost Analysis . . . .

(Continued from Page 61)

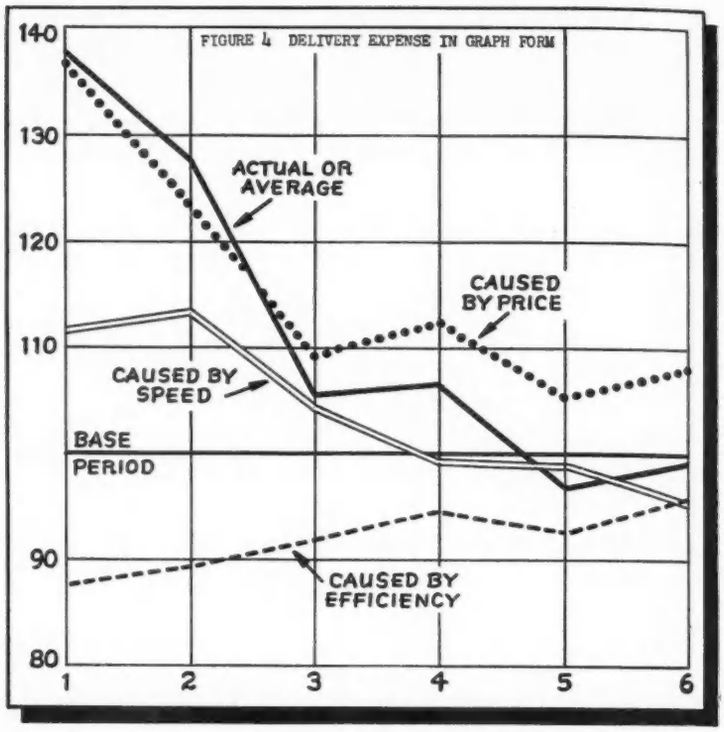


FIG. 4 Results obtained from Fig. 3 are here presented in graph form. Lower prices, increased speed help bring cost down despite less efficiency

analyze and what factors to present normally rests with the accountant or the statistician. At times he might be requested to break down some particular items of cost, but normally he is best qualified to decide what figures require analysis and what the functional causes may be.

Having made this decision, what is the best way to proceed to avoid useless work? First, one must note what is contained in the figure to be analyzed and what factors influence it. The fundamental principle of analysis is to be found in the following simple example:

	Cost
1st Period 100 hrs. of work @ $1.00 per hr. equals	$100.00
2nd Period 150 hrs. of work @ $1.00 per hr. equals	$150.00
Increase	$ 50.00

Additional $50 cost due to more hours worked.

If a second variable is introduced we come up with figures like this:

100 hrs. @ $1.00 equals	$100.00
150 hrs. @ $1.10 equals	$165.00
Increase	$ 65.00

which is due, $50 to more hours worked and $15 to price increase for the 150 hours.

Extending this theory, let us suppose that we are hauling gasoline by tank truck and we know the gallons hauled, miles run and the average number of trucks used in a given period. For simplicity, let us suppose there are no other factors influencing the quantity of gallons hauled other than these. Fig. 1 shows some assumed figures and the normal method of analyzing same. Set down in this fashion, they appear quite complicated and are certainly difficult to read. They would confuse, equally, a clerk or machine operator as well as a department head. By simple rearrangement and proper scheming, the job can be simplified. On Fig. 2 the same figures are used as on Fig. 1, but so arranged that the first six numbers can be supplied by the analyst and the balance of the work done by a clerk or preferably by a machine operator. It is so arranged as to be self-proving. This simple scheme can be used where only one or two factors influence a third and where it is not desired to continue an analysis from period to period.

Identifying Main Factors

IN motor truck operation, there are many factors influencing output and cost, but in most cases, they can be reduced to main causes, namely: Prices, Delivery or Operation Efficiency, Labor or Material Efficiency, Miles Run, Hours Worked, etc.

Let us take a set of assumed facts and set up a work sheet and formula to cover. Assuming that output is contingent upon miles run and miles run is in turn contingent upon hours worked, all of which affects the cost of operation, it is desirous to determine why the delivery costs have changed. Fig. 3 indicates the method and formula designed for machine calculation to break down succeeding periodic costs relative to a base period.

Results are carried forward and shown on a graph (Fig. 4) which indicates, on these assumed figures, that costs are coming down due to price, although increase in speed is assisting in the cost reduction relative to the base period. In this case, performance is getting poorer causing more expense per unit of delivery. It is necessary to remember that this graph purports to break down dollars spent, and must be read as indicating the influence each factor has on the average line. If all other factors had remained the same as during the base period, each line would indicate what the cost would have been, due only to its influence.

Repair Shop Costs

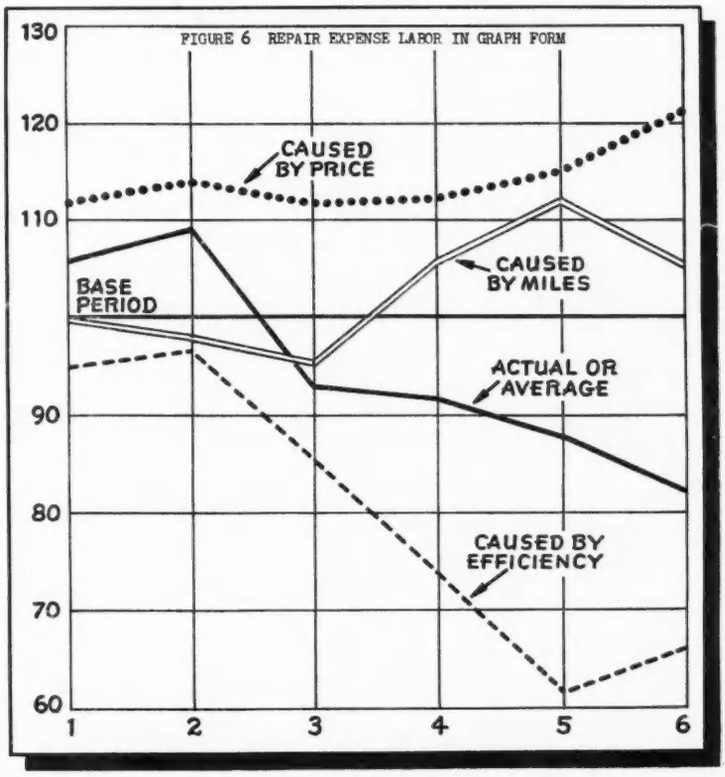
AS another example, let us assume that another manager is concerned principally with the operation of a maintenance repair shop and how efficiently his shop is operating. Assuming that the fleet is static and the truck miles operated per shop repair hour is an indication of efficiency, then Fig. 5 provides a formula whereby efficiency might be measured.

FIGURE 5 ANALYSIS OF REPAIR EXPENSE LABOR

			Base Period	1st Period	2nd Period	3rd Period	4th Period	5th Period	6th Period
Base Period	Line 1 = A	32,982							
	Line 2 = B	24,196							
	Line 3 = C	1,074,491							
	Line 4 = D	1.3631							
	Line 5 = E	.022518							
	1	Repair Expense	32,982	35,014	36,101	30,543	29,908	29,051	29,008
	2	Repair Hours consumed	24,196	22,826	23,248	19,669	19,116	17,599	14,805
	3	Miles Run by Equip. serv.	1,074,491	1,074,391	1,054,905	1,025,995	1,134,082	1,198,175	1,023,675
Scheme									
1 ÷ 2	4	Expense per Hour	1.3631						
2 ÷ 3	5	Repair Hours per Mile Run	.022518						
1 - A	6	Difference in Expense		2,032	3,119	2,439	3,074	3,931	5,974
2 - B	7	Difference in Hours		1,370	948	4,527	5,080	6,597	9,391
3 - C	8	Difference in Miles		100	19,586	48,896	59,591	123,684	50,816
8 x E	9	Chg. Hrs. a/c Chg. in Miles		2.25	441.04	1,101.03	1,341.87	2,785.11	1,144.27
7 - 9	10	Chg. Hrs. a/c Chg. in Hrs. per mile		1,367.75	506.96	3,425.87	6,421.87	9,382.12	8,246.73
9 x D	11	Exp. Chg. due to Chg. in Miles Run		3.07	601.18	1,500.81	1,829.10	3,796.39	1,559.75
10 x D	12	Exp. Chg. due to Chg. in Hrs. per mile		1,864.38	691.04	4,669.80	8,753.65	12,788.76	11,241.12
2 x D	13	Expense at Former Price		31,114.12	31,689.35	26,810.81	26,057.02	23,989.19	20,180.69
1 - 13	14	Chg. Exp. a/c Chg. in Price		3,899.88	4,411.65	3,732.19	3,850.98	5,061.81	6,827.31
11 + 12 + 14	15	Check for Line 6		2,032.43	3,119.43	2,438.42	3,073.57	3,930.56	5,973.56
14 ÷ A x 100	16	Index of Price	100.	111.82	113.37	111.31	111.67	115.35	120.70
12 ÷ A x 100	17	Index of Perf. Effic.	100.	94.35	97.91	85.84	73.46	61.23	65.92
11 ÷ A x 100	18	Index of Miles Run	100.	99.99	98.18	95.45	105.54	111.51	95.27
6 ÷ A x 100	19	Index of Average	100.	106.16	109.45	92.61	91.68	88.08	81.89

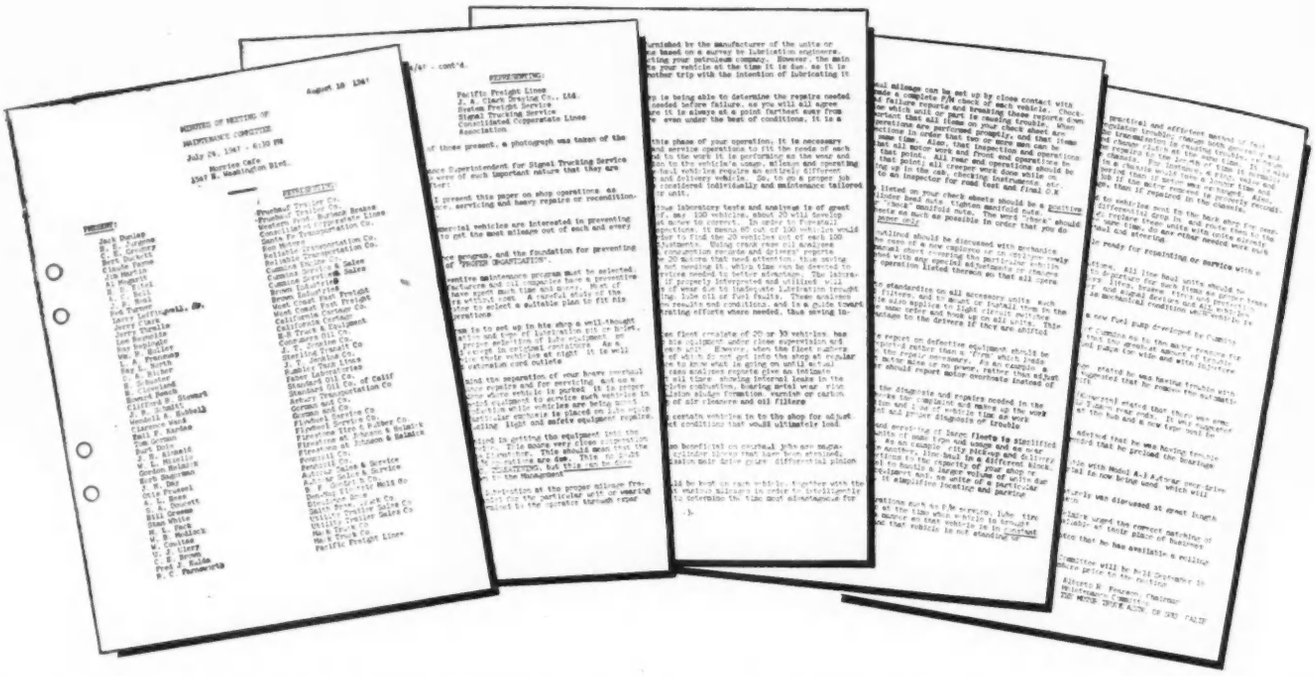
FIG. 5 (above) This worksheet is arranged to show how efficiently a maintenance repair shop is operating. It is assumed that the fleet is static (same number of trucks and that efficiency is measured by truck miles operated per shop hour)

FIG. 6 (below) shows shop efficiency figures derived from worksheet above rearranged in simple graph form



These factors have likewise been transferred to graph (Fig. 6) which on the assumed facts would indicate that increased repair efficiency (better work) has operated to cause the repair cost to decrease. The actual miles have caused little change and price would have caused an increase were it not for the first mentioned increase in efficiency.

It will be noted that the working papers (Figs. 3 and 5) are arranged so that the statistician need merely post the basic data at the top and the rest of the computations can be done by a clerk or a machine operator. There is nothing new or startling in the foregoing. It is merely setting down established principles in a manner to permit ease of computation and clarity in presentation. The same formulae can be used for any type of analysis where there is an actual correlation of functions.



Mimeographed minutes are an important feature of Southern California group; keep members posted even when absent

Southern California Fleet Maintenance Group

by R. RAYMOND KAY
CCJ West Coast Editor

Plans stimulating meetings well in advance, keeps all members posted with full minutes and serves as model for others to emulate

AN INTERCHANGE of information among fleet owners that will help drive down maintenance costs is the aim of the well-planned, stimulating program presented by the Maintenance Committee of the Motor Truck Association of Southern California. The committee performs an outstanding service by increasing the knowledge and effectiveness of superintendents and mechanics; and to make sure the ideas advanced "stick"—mimeographed copies of transscribed minutes are sent not only to members in attendance but also to a hand-picked list totaling 500.

The main work of the Southern California group centers around its monthly meetings. Programs are prepared a year in advance by a 12-man program committee. Subjects chosen for discussion are practical ones and "to the point" for maintenance men. Each topic is broken down into its basic factors so that a thorough discussion will be assured. For instance, here is the 1947-48 program:

March

TRAILERS:

1. Application
2. Weights, Sizes & Measurements
3. Maintenance
   - Open boxes
   - Closed vans
   - Refrigerator boxes

April

MAINTENANCE PLANS, AS SET UP BY THE WHITE MOTOR TRUCK CO.

May

TIRES:

1. Maintenance
   - Inspections
   - Pressures
   - Recapping
2. Types and Their Purpose

June

BRAKES:

1. Common Types Now Used and

(TURN TO PAGE 134, PLEASE)

FLEET OPERATORS' EXPERIENCE HANDBOOK

Part 1

Majority of Fleets Wash Trucks

ON REGULAR SCHEDULES

Of 57.32% who wash regularly, majority employ weekly schedule. The overall majority wash on weekdays, clean truck exterior and under fenders oftener than body interior and undercarriage, always use detergent, do not wipe dry

Analysis **by A. W. GREENE,** *Managing Editor, Commercial Car Journal*

THE OLD ADAGE that good appearance reflects good maintenance apparently is subscribed to by the majority of fleet operators, the greater portion of whom wash the vehicles in their fleet on some kind of regular schedule—daily, weekly, monthly, or any time interval in between.

Table 1 shows that, of the various schedules employed, weekly washing leads, with 30.49 per cent of the fleets reporting this schedule. Quite a few fleets wash more frequently. The table shows 7.72 per cent wash daily, 3.25 per cent wash every other day. Also, in the column headed "Other," there are fleets who wash every third day; every fourth day; and others who reported on a mileage basis, such as "Every 500 miles." In the aggregate, the total of those who wash weekly or oftener exceeds the largest group tabulated, the 42.68 per cent who wash "as needed."

How Often Do Fleets Wash Trucks?

Q. "Normally, how often do you wash trucks?"

A. 57.32 percent wash either daily, every other day, weekly, or on some other regular schedule. 42.68 percent wash "As Needed:"

Table 1

VOCATIONAL GROUPS	Number of Fleets Reporting	Every Day (Per Cent)	Every Other Day (Per Cent)	Every Week (Per Cent)	Every Two Weeks (Per Cent)	Every Month (Per Cent)	As Needed (Per Cent)	Other (Per Cent)
COMMON CARRIER Local & Over-the-Road	36	5.56	8.33	27.78	2.78	8.33	44.44	2.78
FOOD DISTRIBUTION Bakeries, Dairies, Meats & other Food Products	47	14.89	2.13	48.94	14.89		14.89	4.26
GOVERNMENT State, County, Municipal, Federal	56	3.57	3.57	14.29	3.57	5.36	67.86	1.78
CONSTRUCTION Builders, Quarries, Gravel	7	14.29		14.29			71.42	
INDUSTRIAL Local & Over-the-Road	4	25.00		25.00	50.00			
PETROLEUM Producers & Distributors	13		7.69	53.86	15.38		15.38	7.69
PUBLIC UTILITY Gas, Power, Water & Telephone	41			19.51	7.32	4.88	63.41	4.88
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department Stores, Beverage	25	16.00		40.00	8.00	4.00	32.00	
TRUCK RENTAL	7	14.29	14.29	57.13	14.29			
TRUCK & BUS FLEETS, MIXED	10	10.00		30.00			30.00	30.00
TOTAL & AVERAGE	246	7.72	3.25	30.49	8.13	3.66	42.68	4.07

As a matter of fact, there are many fleets in the "As Needed" column who normally wash quite frequently. They merely do not have set schedules and, as a result, it was necessary to tabulate their returns under a general heading. Typical is the report of one fleet operator who replied, "We wash as needed and as time permits; it may be once a week, twice a week, or every 10 days."

Weather Affects Washing Schedules

WEATHER is a great variable affecting washing. Over 52 per cent of the fleets reported that they wash less frequently in certain seasons—Winter, principally, as shown in Table 2. Actually, the cue lies in the word "weather." When the weather is clear and dry, fleets find they can skip a wash now and then. Conversely, when the weather is rainy, or snow, slush or sleet prevails, many fleets just don't bother washing as frequently.

Low temperature is another factor. Explanations from fleets who report less frequent washings in the Winter indicate that many in this group wash their vehicles outdoors. Thus, even though the weather may be clear, washing is less frequent because of the obvious discomfort to the washers at freezing temperatures.

The column headed, "Other," contains fleets whose replies were, "It depends on the weather," or who reported more than one season, such as, "Mid-Winter and Mid-Summer," or "May to November." Included also, are a few fleets who reported "Spring" or "Rainy Weather." There were not enough of these to permit separate tabulation.

Perhaps the most important observation to be made about Table 2 is that, apparently, even weather conditions do not alter the regular washing schedules of almost 42 per cent of the reporting fleets.

Underbody Washing Practice

TABLE 3 shows that the insides of the trucks are not being washed on any regular schedule. 52.85 per cent of the reporting fleets state that the inside is washed "as needed." However, of those who adhere to schedules, 9.76 per cent wash inside less often than the outside, and 3.65 per cent wash more.

As far as the underbody is concerned, 58.13 per cent of the fleets wash under fenders at the same time as the outside of their vehicles, but only 37.80 per cent wash the vehicle's undercarriage at the same time. Quite a large percentage reported that they wash these parts occasionally, as shown in Table 4.

57% Fleets Always Use Detergent

THE majority of fleets aim to do more than rinse off the dust when doing a wash job. As shown in Table 5, 57.32 per cent of the reporting fleets always use a soap product or other detergent when washing their vehicles; 29.67 per cent use a detergent occasionally. Of all fleets who use some kind of detergent, either regularly or occasionally, 38.79 per cent use a type containing a wetting-out agent to speed and improve the quality of the wash job, as shown in Table 6.

Few Fleets Wipe Dry

A DRYING operations normally is not included as part of a wash job, as shown in Table 7. The majority of fleets, 71.95 per cent, let their vehicles dry in the air circulating in the parking area. Only 22.76 per cent wipe dry, 5.29 per cent use the high pressure hose to blow off the water.

There were a few fleets who reported that they wipe cabs but not bodies, or that they wipe small bodies but not large ones, wipe passenger cars but not trucks, and so on. In each case, the fleet replies were tabulated in accordance with the prevailing practice and not the exception. If, for example, the fleet was a dairy and had many more local deliveries than over-the-road trucks, and it was reported that only small trucks were wiped, then the fleet was classified as one that wipes dry after washing; if only passenger cars were wiped and not trucks, and trucks made up the major portion of the fleet, that fleet also was placed in the wipe dry column.

Trucks Washed Weekdays

WHEN fleets wash their trucks is shown in Table 8. Almost 90 per cent of the reporting fleets wash their trucks during the week; 10.57 per cent give their fleets a scrubbing over the week ends. Of

Weather Conditions Affect Washing Schedules

Q. "Do you wash less frequently at any particular season of the year?"

A. 52.03 percent fleets wash less frequently under certain weather conditions. Of these fleets, 47.66 percent wash less in Winter, 32.03 percent less in Summer.

Table 2

VOCATIONAL GROUPS	Total Number of Fleets Reporting	YES (Per Cent)	NO (Per Cent)	No Answer (Per Cent)	Number of Fleets Reporting YES	Summer (Per Cent)	Winter (Per Cent)	Dry Weather (Per Cent)	Other (Per Cent)
COMMON CARRIER Local and Over-the-Road	36	63.89	22.22	13.89	23	21.74	56.52	13.04	8.70
FOOD DISTRIBUTION Bakers, Dairies, Meats and other Food Products	47	34.04	61.70	4.26	16	12.50	62.50	12.50	12.50
GOVERNMENT State, County, Municipal, Federal	56	58.93	37.50	3.57	33	30.30	51.52	9.09	9.09
CONSTRUCTION Builders, Quarries, Gravel	7	28.57	57.14	14.29	2	— —	100.00	— —	— —
INDUSTRIAL Local and Over-the-Road	4	50.00	50.00	— —	2	50.00	50.00	— —	— —
PETROLEUM Producers and Distributors	13	53.85	38.46	7.69	7	57.14	42.86	— —	— —
PUBLIC UTILITY Gas, Power, Water and Telephone	41	70.73	29.27	— —	29	37.94	31.03	13.79	17.24
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal and Ice, Department Stores, Beverage	25	44.00	56.00	— —	11	63.64	27.27	— —	9.09
TRUCK RENTAL	7	14.29	71.42	14.29	1	— —	100.00	— —	— —
TRUCK AND BUS FLEETS, MIXED	10	40.00	30.00	30.00	4	25.00	50.00	— —	25.00
TOTAL AND AVERAGE	246	52.03	41.87	6.10	128	32.03	47.66	9.37	10.94

those who wash during the week, the majority, 35.37 per cent, do the job during the day; 25.20 per cent wash at night; and 28.86 per cent wash during day and night shifts.

As in the preceding question, there were a few fleets whose washing periods differed from the majority. Some of these wash trucks continuously—days, nights, and week ends. Because there are more days and nights during the week than over a week's end, these fleets were included in the "Week Days, Day and Night" column. The same type of reasoning was employed in the case of fleets who wash trucks and tractors week days and trailers on week ends, and the few other fleets who split up their washing jobs in one manner or another.

Next month, the analysis of fleet washing practices will be continued. It will cover the type of washing equipment in use, types of washer personnel, the man-hours required to wash the different types of fleet vehicles, the rates paid washer personnel, and so on. (TURN TO NEXT PAGE, PLEASE)

Inside of Truck Bodies Washed Only as Needed

Q. "Do you wash inside of your trucks at the same time as the outside?"

A. 57.85 percent fleets wash inside of bodies only as needed. Of remainder, 31.70 percent wash inside on same, more or less frequent schedule. 15.45 percent fleets never wash inside of body:

Table 3

VOCATIONAL GROUPS	Number of Fleets Reporting	Wash Inside Same Time As Outside (Per Cent)	Less Often (Per Cent)	More Often (Per Cent)	As Needed (Per Cent)	Never (Per Cent)
COMMON CARRIER Local and Over-the-Road	36	5.55	16.67	— —	63.89	13.89
FOOD DISTRIBUTION Bakeries, Dairies, Meats and other Food Products	47	19.15	10.64	10.64	44.68	14.89
GOVERNMENT State, County, Municipal, Federal	56	32.14	3.57	5.36	50.00	8.93
CONSTRUCTION Builders, Quarries, Gravel	7	57.13	14.29	— —	14.29	14.29
INDUSTRIAL Local and Over-the-Road	4	25.00	— —	— —	75.00	— —
PETROLEUM Producers and Distributors	13	38.46	15.38	— —	38.46	7.70
PUBLIC UTILITY Gas, Power, Water and Electric	41	9.76	4.88	— —	53.66	31.70
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal and Ice, Department Stores, Beverage	25	4.00	4.00	4.00	64.00	24.00
TRUCK RENTAL	7	14.28	42.86	— —	42.86	— —
TRUCK AND BUS FLEETS, MIXED	10	— —	20.00	— —	80.00	— —
TOTAL AND AVERAGE	246	18.29	9.76	3.65	52.85	15.45

How Often Do Fleets Wash Under Fenders and Undercarriage?

Q. "Do you wash underbody parts at the same time as the outside?"

A. 58.13 percent wash under fenders at the same time as outside, 37.80 percent wash undercarriage at the same time:

Table 4

VOCATIONAL GROUPS	Number of Fleets Reporting	UNDER FENDERS			UNDERCARRIAGE		
		Always (Per Cent)	Occasionally (Per Cent)	Never (Per Cent)	Always (Per Cent)	Occasionally (Per Cent)	Never (Per Cent)
COMMON CARRIER Local & Over-the-Road	36	52.78	38.89	8.33	47.22	47.22	5.56
FOOD DISTRIBUTION Bakeries, Dairies, Meats & other Food Products	47	46.81	44.68	8.51	31.91	53.20	14.89
GOVERNMENT State, County, Municipal, Federal	56	64.29	32.14	3.57	51.79	41.07	7.14
CONSTRUCTION Builders, Quarries, Gravel	7	57.14	42.86	.....	71.43	28.57	.....
INDUSTRIAL Local & Over-the-Road	4	75.00	25.00	.....	75.00	25.00	.....
PETROLEUM Producers & Distributors	13	84.62	15.38	.....	38.46	53.85	7.69
PUBLIC UTILITY Gas, Water, Power & Telephone	41	68.29	29.27	2.44	26.83	51.22	21.95
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department Stores, Beverage	25	60.00	32.00	8.00	24.00	44.00	32.00
TRUCK RENTAL	7	28.58	57.14	14.28	.....	85.72	14.28
TRUCK & BUS FLEETS, MIXED	10	30.00	60.00	10.00	20.00	50.00	30.00
TOTAL & AVERAGE	246	58.13	36.18	5.69	37.80	47.97	14.23

Fleets Use Soap or Detergent For Washing Trucks

Q. "Do you use soaps or other detergents?"

A. 57.32 percent fleets always use a detergent, 29.67 percent use a detergent occasionally, 13.01 percent never use a detergent:

Table 5

VOCATIONAL GROUPS	Number of Fleets Reporting	Always (Per Cent)	Occasionally (Per Cent)	Never (Per Cent)
COMMON CARRIER Local & Over-the-Road	36	58.34	22.22	19.44
FOOD DISTRIBUTION Bakeries, Dairies, Meats & other Food Products	47	68.08	23.41	8.51
GOVERNMENT State, County, Municipal, Federal	56	41.07	48.22	10.71
CONSTRUCTION Builders, Quarries, Gravel	7	42.86	28.57	28.57
INDUSTRIAL Local & Over-the-Road	4	50.00	50.00	
PETROLEUM Producers & Distributors	13	69.23	23.08	7.69
PUBLIC UTILITY Gas, Power, Water & Telephone	41	60.98	21.95	17.07
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department Stores, Beverage	25	60.00	20.00	20.00
TRUCK RENTAL	7	57.14	42.86	
TRUCK & BUS FLEETS, MIXED	10	70.00	30.00	
TOTAL & AVERAGE	246	57.32	29.67	13.01

38.79% Use Detergent With a Wetting-out Agent

Q. "Does your favorite soap or detergent contain a wetting-out agent?"

A. 38.79 percent use a detergent with a wetting-out agent, 10.75 percent use a detergent without a wetting-out agent:

Table 6

VOCATIONAL GROUPS	Number of Fleets Reporting "Always" or "Occasionally"	YES (Per Cent)	NO (Per Cent)	Don't Know (Per Cent)
COMMON CARRIER Local & Over-the-Road	29	48.28	6.89	44.83
FOOD DISTRIBUTION Bakeries, Dairies, Meats & other Food Products	43	51.16	4.65	44.19
GOVERNMENT State, County, Municipal, Federal	50	20.00	22.00	58.00
CONSTRUCTION Builders, Quarries, Gravel	5	40.00		60.00
INDUSTRIAL Local & Over-the-Road	4	25.00	25.00	50.00
PETROLEUM Producers & Distributors	12	58.33		41.67
PUBLIC UTILITY Gas, Power, Water, & Telephone	34	32.35	5.88	61.77
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department Stores, Beverage	20	40.00	10.00	50.00
TRUCK RENTAL	7	42.86	28.57	28.57
TRUCK & BUS FLEETS, MIXED	10	50.00	10.00	40.00
TOTAL & AVERAGE	214	38.79	10.75	50.46

Majority of Fleets Let Trucks Dry In Open Air

Q. "After washing, do you wipe dry entire body, air dry by surrounding atmosphere, or air dry by compressed air?"

A. 71.95 percent fleets let washed vehicle dry in surrounding atmosphere, 22.76 percent wipe entire body dry, 5.29 percent dry vehicle by compressed air:

Table 7

VOCATIONAL GROUP	Number of Fleets Reporting	Air Dry by Surrounding Atmosphere (Per Cent)	Wipe Dry Entire Body (Per Cent)	Air Dry by Compressed Air (Per Cent)
COMMON CARRIER Local & Over-the-Road	36	77.78	19 44	2.78
FOOD DISTRIBUTION Bakeries, Dairies, Meats & other Food Products	47	89.36	6.38	4.26
GOVERNMENT State, County, Municipal, Federal	56	64.21	28.57	7.14
CONSTRUCTION Builders, Quarries, Gravel	7	42.86	42.86	14.28
INDUSTRIAL Local & Over-the-Road	4	50 00	25 00	25.00
PETROLEUM Producers & Distributors	13	61.54	38.46	
PUBLIC UTILITY Gas, Power, Water & Telephone	41	53.66	39.02	7.32
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department Stores, Beverage	25	88.00	12.00	
TRUCK RENTAL	7	57.14	28.58	14.28
TRUCK & BUS FLEETS, MIXED	10	100.00		
TOTAL & AVERAGE	246	71.95	22.76	5.29

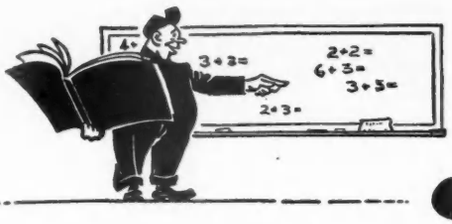
Most Fleets Wash Trucks On Weekdays

Q. "When do you wash your trucks?"

A. 89.43 percent wash on weekdays as follows: 35.37 percent during the day, 25.20 percent at night, 28.86 percent wash day and night:

Table 8

VOCATIONAL GROUP	Number of Fleets Reporting	WEEK DAYS Day (Per Cent)	WEEK DAYS Night (Per Cent)	WEEK DAYS Day and Night (Per Cent)	Week Ends (Per Cent)
COMMON CARRIER Local & Over-the-Road	36	58.34	8.33	19.45	13.88
FOOD DISTRIBUTION Bakeries, Dairies, Meats & other Food Products	47	42.55	12.77	31.91	12.77
GOVERNMENT State, County, Municipal, Federal	56	50.00	16.07	23.22	10.71
CONSTRUCTION Builders, Quarries, Gravel	7	57.13	14.29	14.29	14.29
INDUSTRIAL Local & Over-the-Road	4	25.00	25.00	25.00	25.00
PETROLEUM Producers & Distributors	13	30.77	38.46	30.77	
PUBLIC UTILITY Gas, Power, Water & Telephone	41	9.76	46.34	34.14	9.76
RETAIL DELIVERY (Other than Food) Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department, Stores, Beverage	25	20.00	64.00	8.00	8.00
TRUCK RENTAL	7		14.28	71.44	14.28
TRUCK & BUS FLEETS, MIXED	10		10.00	90.00	
TOTAL & AVERAGE	246	35,37	25.20	28.86	10.57



CCJ QUIZ

by ROBERT F. BAHL

This quiz ought to be a cinch for truck mechanics, because it deals entirely with repair tools. Anyone else, though, may find enough sticklers to make him put on his thinking cap to hit the passing mark of 70. Count 10 points for each correct answer. Answers are on page 87.

1.

In loosening a "tough nut" with a wrench, a good mechanic would tell you it is best to.....

a. push on the wrench.
b. pull on the wrench.
c. it all depends on whether you are left-handed or right-handed.

2.

You're familiar with those new-fangled screws that have two slots, one crossing the other. The screwdriver you use with them is called.....

a. a crisscross screwdriver.
b. an offset screwdriver.
c. a Phillips screwdriver.
d. a T-head screwdriver.

3.

In an emergency, one of these chisels can be used to extract a broken stud.....

a. cold chisel.
b. cape chisel.
c. round nose chisel.
d. diamond point chisel.

4.

The hammer most used by truck mechanics is the kind with a flat head on one end and a rounded head on the other. The round head is called the.....

a. ball.
b. peen.
c. eye.
d. nose.

5.

If you want to tighten a nut just so much and no more, the wrench to use would be.....

a. a spanner wrench.
b. an Allen wrench.
c. a "go and no go" wrench.
d. a torque wrench.

6.

Every good mechanic realizes the importance of accurate scales. We wonder, though, how many know that the only standard of measurement that has been legalized by the United States government is the .....

a. inch.
b. foot.
c. yard.
d. meter.

7.

In a "bastard file," what does the term "bastard" refer to?

a. the shape of the file.
b. the coarseness of the teeth.
c. the size of the file.
d. the angle of the teeth.

8.

When you yell for "Mike," you are liable to get the Irish foreman or else a tool for.....

a. opening crates.
b. measuring very close dimensions.
c. hammering a dented fender.
d. trimming ignition wires.

9.

Which of these tools would be most useful in removing a rivet?

a. an "Ezy-Out."
b. a pin punch.
c. a speed handle.
d. a stud extractor.

10.

We divide this last question into five parts just to make it tougher for you to get a perfect score. Answer "true" or "false" to each statement and take two points each time you're right.

a. The harder the metal to be cut, the faster you should work a hacksaw. T or F.
b. A 12-point wrench is used on hex nuts. T or F.
c. The blade of a screwdriver should be kept well-tapered. T or F.
d. It is safe to use a screwdriver to find which sparkplug is causing the engine to miss. T or F.
e. A good mechanic never uses pliers to tighten or loosen nuts. T or F.

JOBSERVATIONS

by Buster Rothman

No rule for success will work if you don't

★ ★ ★

Your future won't have anything in store for you unless you have something in store for your future

★ ★ ★

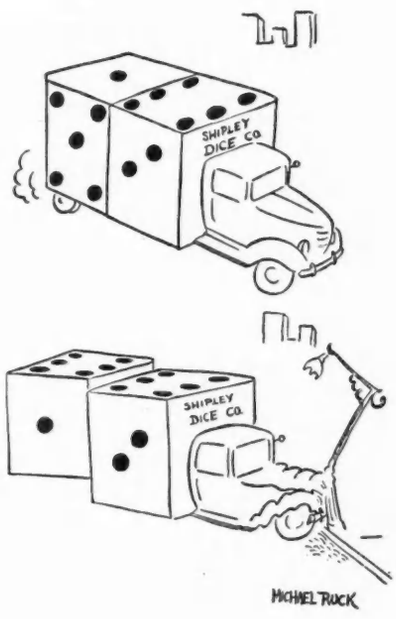
Just itching for success isn't enough: you've got to get out and scratch for it

★ ★ ★

It is better to undertake a large task and get it half done than to undertake nothing and get it all done

★ ★ ★

Taking a day off is easy: it's putting it back that's hard



DRIVE SLOWGANS

By Buster Rothman

The highway cut-up often is

★ ★ ★

It may not be your fault—only your funeral

★ ★ ★

No hearse-play at the wheel

★ ★ ★

Only fools neglect the rules

★ ★ ★

Children err: pray take care!

★ ★ ★

School zone warning; "Use Your Eyes —Save Our Pupils!"

★ ★ ★

No one can gain in a race with a train.

★ ★ ★

Stop, Look and Live!

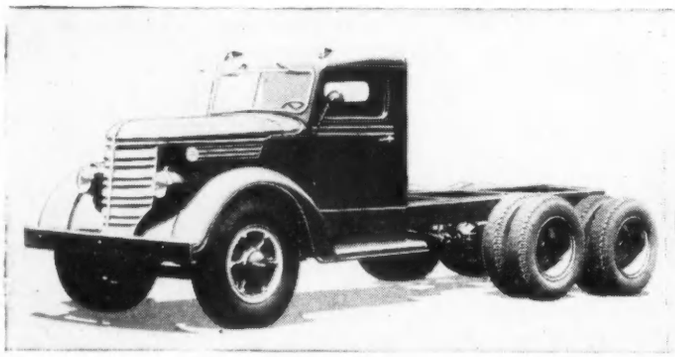
★ ★ ★

Wait a Minute—Your Life Is In It!

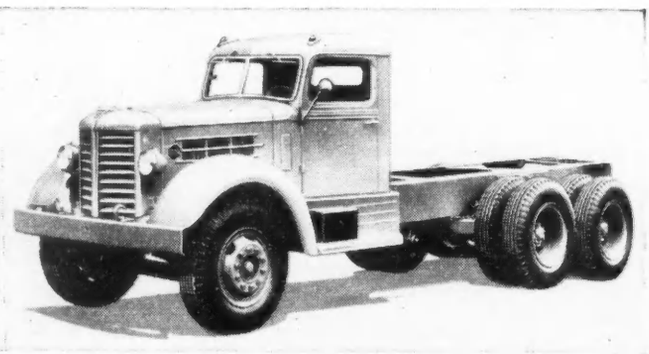
FEDERAL

Announces

5 New Six Wheelers . . . .



The 629M and 229ML Federal 6-wheeler have a GVW of 27,500, with Hercules engines of 320 and 339 cu in. displacement respectively



Models 635M, 645M and 645MA resemble this. They have Continental, valve-in-head engines and GVW's of 36,000, 38,000 and 38,000 lb respectively

Gasoline Engine Specifications

Truck Model	629M	629ML	635M	645M, 645MA
Engine	Hercules JXDF	Hercules JXLDF	Continental T-6371F	Continental T-6427F
Type	L-head	L-head	Valve-in-head	Valve-in-head
Bore (in.)	4	4	4⅛	4-5/16
Stroke (in.)	4¼	4½	4⅝	4⅞
Displacement (cu. in.)	320	339	371	427
Bhp (max)	112 @ 2800 rpm	126 @ 2800 rpm	133 @ 2600 rpm	155 @ 2600 rpm
Torque (lb ft) (max.)	250 @ 1400 rpm	272 @ 1400 rpm	290 @ 1400 rpm	342 @ 1400 rpm
Carburetor	Carter	Zenith	Zenith	Zenith

General Specifications

	629M	629ML	635M	645M	645MA
Rear Axle					
Make	Timken	Timken	Timken	Timken SD-3010-P	Timken SD-3010-P
Type	Tandem Bevel SBD-1055-DPH	Tandem Bevel SBD-1055-DPH	Tandem Bevel SBD-1055-DPH	Tandem Double Reduction	Tandem Double Reduction
Ratio	6.17	6.17	6.83	8.27	8.27
Opt.	7.04, 5.29	7.04, 5.29	5.57, 7.80	9.16, 10.22	9.16, 10.22
Clutch					
Make	Borg & Beck	Borg & Beck	Borg & Beck	Lipe	Lipe
Type	Single Plate	Single Plate	Single Plate	Single Plate	Single Plate
Size	12 in.	13 in.	13 in.	14 in.	14 in.
Brakes—Front					
Make	Lockheed	Lockheed	Lockheed	Timken-Westinghouse	Timken-Westinghouse
Type	Hydraulic	Hydraulic	Hydraulic	Heavy Duty Air	Heavy Duty Air
Size	16 x 3	16 x 3	16 x 3	16¼ x 3	16¼ x 3
Brakes—Rear					
Make	Timken DP Hydraulic	Timken DP Hydraulic	Timken DP Hydraulic	Timken P	Timken P
Type				Heavy Duty Air	Heavy Duty Air
Size	16¼ x 3 with Hydrovac booster	16¼ x 3 with Hydrovac booster	16¼ x 4 with Hydrovac booster	16½ x 6	16½ x 6
Transmission—Main					
Make	Clark 205-VO	Clark 205-VO	Clark 270-VO	Clark 270-VO	Clark 270V-5
Type	5-speed overdrive	5-speed overdrive	5-speed overdrive	5-speed overdrive	5-speed direct

IN ANNOUNCING five new tandem axle six-wheeler models, Federal Motor Truck Co. now offers a comprehensive coverage of the field in six-wheelers. The complete line, including the three heavy-duty models announced earlier, has a range of GVW from 27,500 to 55,000 lb. The line-up of new models with GVW ratings and corresponding wheelbase options and road speeds is given in the table below:

Model	GVW (lb.)	Wheelbase (in.)	Road Speed High Range (mph)	Road Speed Aux. Overdrive (mph)
629M-629ML	27,500	163,181,199	51.2	
635M	36,000	167,185,203	45.4	
645M	38,000	167,179,185,203,215	47.7	
645MA	38,000	179,185,203,215	37.5	43.7

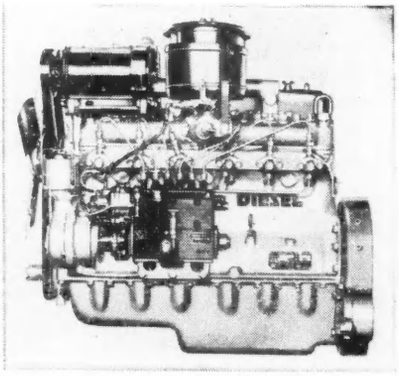
All models have the 7-bearing crankshaft, with high lead bronze used in the JXDF and the JXLDF, and Clevite 77 used in the Continental engines. Pistons are of Zollner alumi-

(TURN TO PAGE 74, PLEASE)

Diesel Engine Specifications

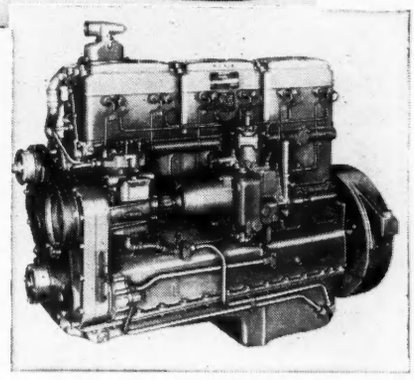
Truck Model	D29M	D65MA	D65MA (Optional at extra cost)
Engine	Hercules DJHF	Cummins HB-600F	Cummins NHB-600F
Bore (in.)	3¾	4⅞	5⅛
Stroke (in.)	4½	6	6
Displacement (cu. in.)	298	672	743
Bhp (max)	95 @ 2600 rpm	150 @ 1800 rpm	200 @ 2100 rpm
Torque (lb ft) (max)	232 @ 1500 rpm	490 @ 700 rpm	540 @ 1000 rpm
Pistons	Zollner, heavy duty, aluminum alloy	Special alloy cast iron	Special alloy cast iron

. . . . 4 New Diesel Models



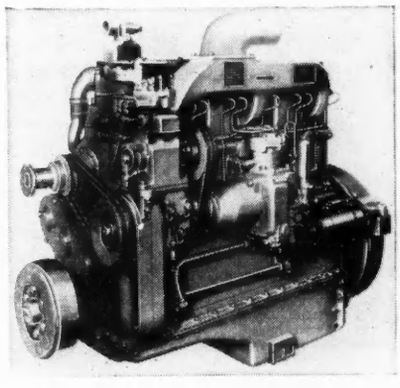
The Hercules diesel engine used in D29 M series has a 3¾-in. bore, a 4½-in. stroke, 298 cu in. displacement

Model D65MA diesel truck with a GVW of 30,000 lb and a nominal rating of 6 to 8 tons with the Cummins engine



The Cummins HB-600F engine has a 4⅞-in. bore, a 6-in. stroke and a displacement of 672 cu in. Bhp, 150 at 1800 rpm

The Cummins NHB-600F supplied as optional equipment. It has a 5⅛-in. bore, a 6-in. stroke and develops 200 hp at 2100 rpm



A NEW line of diesel-powered medium and heavy-duty trucks announced by Federal Motor Truck Co., features two basic models and comprises four entirely different trucks. Diesel models follow the same pattern as the gasoline-powered vehicles now in production.

The range of capacities and ratings is as follows:

Model	GVW (lb.) as truck	GRW (lb.) with trailer	Nominal Rating (tons)
D29M	20,000	36,000	3 to 4
D65MA	30,000	60,000	6 to 8

These models are similar to the gasoline models in body design and appearance, the only noticeable difference being in the D65MA, with a hood length 7 in. longer than on the corresponding gasoline model.

The three D29 Series models are powered with the Hercules DJXHF diesel engine. The Model D65MA has the Cummins HB-600F diesel engine as standard equipment. As optional equipment, at extra cost, Federal can supply the Cummins 200-hp NHB-

(TURN TO NEXT PAGE, PLEASE)

Diesel Truck Dimensions

Wheelbase (in.)	Cab to End Frame (in.)			"CA" Dimensions (in.)		
	D29M-D29M2	D29MA	D65MA	D29M-D29M2	D29MA	D65MA
139	101			60½		
146	107			67		
155	119	119		76	76	
162			108			74
167	143	143		88	88	
174			120-143			86
180	167	167		101	101	
191			167			103
194	191	191		115	115	
209			204			121½

Federal Diesel Models

(CONTINUED FROM PAGE 71)

600F diesel. In each case the engine models supplied by Federal incorporate certain basic changes in specifications to suit the special requirements of the vehicles.

All engines are installed with a three-point non-metallic mounting. The Hercules engines feature a counterweighted crankshaft with Tocco-hardened journals. The Cummins engines have Tocco-hardened crankshafts and are fitted with torsional vibration dampers. Main and connecting rod bearings on the three engines are of steel-back precision type, Hercules using a bearing alloy of high lead bronze composition, and Cummins of copper-lead alloy. The fuel injection pump on the Hercules engine is of plunger type, chain driven. In addition, the Hercules engine is fitted with a Bendix "Convac" belt driven vacuum pump.

The Hercules DJXHF engine has nickel alloy intake valves, Silchrome exhaust valves; with intake valve diameter of 2 in., and exhaust valve diameter of 1 9/16 in. The Cummins engines are fitted with alloy steel exhaust valves and Stellite-faced exhaust valve seats. Crankcase oil capacity on the Hercules engine is 9 qt, including the oil filter; on the Cummins, 20 qt.

Since the combinations of axles and transmissions and other details vary from one model to another and, moreover, vary in accordance with the requirements of individual truck operators, it is not practical to list the variety of chassis options offered in this line. Generally speaking the D29 Series has chassis details quite similar to those of the 29 Series gasoline models. The D65MA, on the other hand, while similar to the gasoline models offers many modifications and optional axle and transmission combinations.

The D29 Series features the Hotchkiss drive while the D65MA has radius rods. As standard equipment, the D29M has the Timken hypoid rear axle and five-speed direct drive transmission; the D29M2 is provided with a Timken two-speed hypoid helical double reduction rear axle, and five-speed direct drive transmission; while the D29MA uses the Timken hypoid gear rear axle in combination with a five-speed direct drive transmission and a Brown-Lipe three-speed auxiliary transmission.

The D65MA offers as standard equipment the Timken S-200P hypoid-helical, double reduction rear axle in combination with a Spicer 7741 four-speed transmission and Spicer 703-F three-speed auxiliary transmission.

The electrical system on all models features three separate sets of wiring harness with one fuse for each circuit and three spares. On the D65MA the electrical system has a 12-volt, 600-watt Delco-Remy generator; all other models use a 12-volt, 300-watt Delco-Remy generator. All models are equipped with a 24-volt D-R starter. Each model is fitted with four, 19-plate, 6-volt batteries.

Radiator cores have greater cooling capacity and are of fin-and-flat tube type on all models. Water pumps are of large packless type on the Hercules engine; and of circulating centrifugal type on the Cummins.

(TURN TO PAGE 74 PLEASE)

Federal Diesel Models

(CONTINUED FROM PAGE 72)

The D29M and D65MA are equipped with the Gemmer triple tooth worm and roller type steering gear with a ratio of 20.4 to 1 on the D29M; 28.4 to 1 on the D65MA.

The front brakes on the D29M Series are Lockheed hydraulic while rear brakes are Timken dual primary hydraulic with Hydrovac vacuum self-contained power booster unit. Brakes on the D65MA are of heavy-duty air type—using a Bendix-Westinghouse 12 cu ft air compressor with two air reservoirs. Front brakes on this model are Timken-Westinghouse while rears are Timken "P" Series type. The D65MA also features the Tru-Stop parking brake—16-in. diameter, four-shoe type.

The standard cab supplied on all models weighs 507 lb. In addition, Federal offers a sleeper cab weighing 960 lb.

Federal Six Wheelers

(CONTINUED FROM PAGE 70)

num alloy. The JXDF has alloy steel exhaust valves while the JXLDF has the rotator type, Eatonite faced. The Continental engines use the roto type, Stellite faced, with exhaust valve inserts. King Seeley velocity type governors are used on the Hercules engines, while the Continental uses the Mallory mechanical. The JXDF has a Carter carburetor, with all other models using the Zenigh downdraft. All are fitted with iil bath air cleaners.

The cooling system has a radiator core of fin-and-flat tube type, 4 in. in thickness, having a coolant of 21 qt for the 629M and 629ML, 33 qt on the 635M, 29 qt on the 645M and 645MA. All models feature by-pass thermostat control of temperature.

All engines listed here are fitted with Tocco-hardened, counterweighted and balanced crankshafts and are equipped with crankcase ventilating systems.

The electrical system is Delco-Remy, with a 6-volt, 240-watt generator on the 629M and 629ML, and a 320-watt generator on the other three models. The 645M and 645MA on the other hand, offer a 12-volt system with a 320-watt generator at extra cost. With this option Federal provides two 19-plate, 6-volt heavy-duty batteries. The wiring for all models features a group of three separate harnesses with a fuse for each circuit and three spare fuses.

Parking brakes of conventional drum type are used on the 629M and 629ML. The remaining models all feature the Tru-Stop brake. On the 645M and 645MA the front wheel brakes are controllable by a limiting valve.

The 635M offers heavy-duty Bendix Westinghouse air brakes as optional equipment, with a 7¼ cu ft compressor. Optional equipment on the 645M and 645MA models is the SW-3010-P Timken worm drive rear axle with ratios of 6.80 and 7.75 to 1.

Standard tire equipment is as follows: 629M and 629ML—8.25:20; 635M—9.00:20, 645M and 645MA—10.00:20—12-ply. The latter models also offer optional 10.00:22—12-ply tires.

The powerful press shown in the illustration is used for forming. It has a capacity of 3,000 tons and will form side rails from alloy steel 3/8" thick, 380" long. The approximate weight of this press is 1,100,000 pounds.

PARISH PRESSED STEEL HEAT-TREATED TRUCK AND TRAILER FRAMES

THE FRAME WITH THE *"Spring-back"*

Made of special steels and alloys, formed by high-tonnage presses, heat-treated, tested and straightened by competent master craftsmen, PARISH FRAMES have a quality that makes them different.

Having a strength value 125% greater than steels commonly used, they hold the parts attached to them in correct position in spite of rough roads and heavy loads which produce stresses and strains which tend to wrench or twist them out of shape.

This punishment goes on for years, the number depending upon the design and fabrication of the frame. PARISH Pressed Steel, Heat-treated Frames, because of their "spring-back" quality, last years longer. Insure yourself longer trouble-free operation of your fleet by specifying the frame with the "spring-back"—The PARISH Pressed Steel, Heat-treated Frame—"the keel of the chassis."

PARISH
Heat-Treated

The Keel of the Chassis

PARISH PRESSED STEEL CO. *Subsidiary of* **DANA CORP.**
READING, PA.

Western Representative: F. Somers Peterson, 57 California St., San Francisco, Cal.

Highlighting 45th Annual Convention of American Road Builders' Association was a 30-acre show on Chicago's lake front

Road Builders Plan for

WHAT CAN WE do nationally, in the way of highway improvements, to take care of the steady increase in our motor vehicle mileage, including the fact that traffic by our millions of motor trucks is increasing more rapidly than any other type of highway transportation?

This is the national challenge which was flung out dramatically by the American Road Builders' Assn. during the nine days of their 45th Annual Convention and Road Show held in Chicago from July 16 to 24 inclusive.

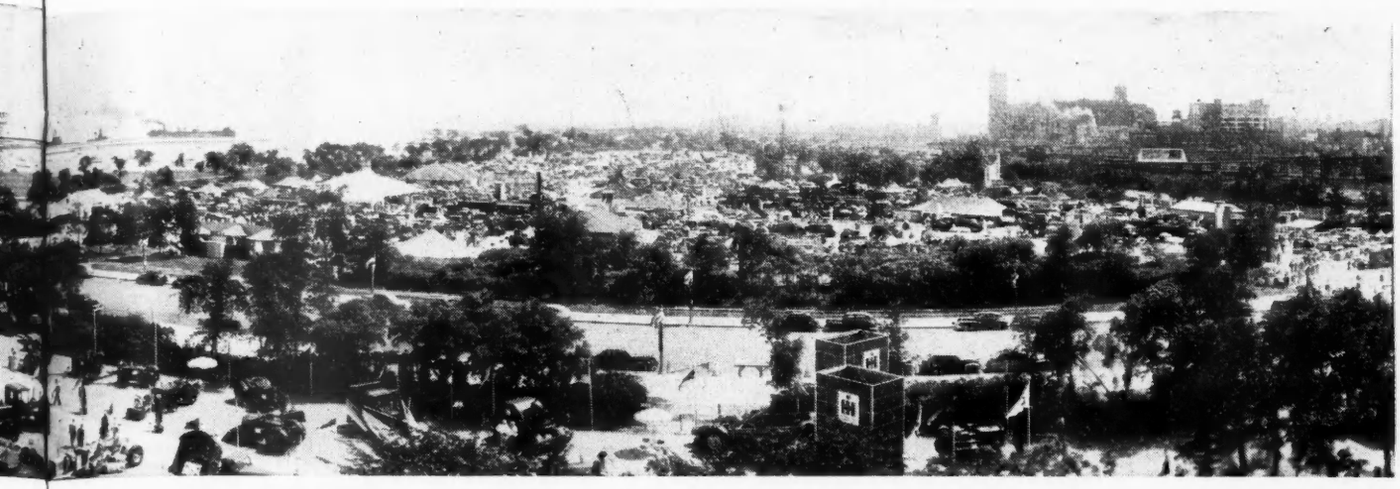
The one topping dramatic feature was a gigantic 30-acre outdoor exhibit the lake front of some 8000 different units of road construction and maintenance machinery—most of it motorized—declared to be "over six times as large as the biggest short-term industrial exhibit ever held anywhere in the world." This outdoor show also was supplemented by a thin two-mile stretch of indoor exhibits around the ground floor and mezzanine edges of the nearby giant Chicago Stadium. The 330 exhibitors displayed over 800 different categories of road-making and road-maintenance equipment and machinery valued at $25,000,000. The expected total attendance of 100,000 good-roads delegates and visitors was overshot during the first four days, and nearly doubled during the entire nine-day convention period.

Highways 20 Years Behind

PRESIDENT J. T. Callaway of the American Road Builders' Assn., in the official opening of the convention, summarized the national road-building challenge when he stated that America was expecting "within a few years" a registration of 60,000,000 motor vehicles. This means, he said, that at the present time the Nation is "twenty years behind in highway adequacy and safety, comparable with automotive progress and practice." As spokesman for his fellow road builders, he declared that the Nation thereby has "willed us a job!"

Major General Philip B. Fleming, Administrator of Federal Works Agency, in his address to the delegates presented the Government viewpoint. "The time has come," said he, "when we must not only build more and better highways, but we must build them faster than ever before. Of the millions of vehicles making daily use of the highways, by far the greater part are engaged in essential or useful service—service to business, to industry, and to the family. When a large part of highway movement is delayed and endangered by congestion and highway deficiencies, there is great economic waste. The Nation cannot permit its highways to deteriorate while the demands for highway service grow by leaps and bounds. The situation calls for bold planning and prompt action . . . The physical volume of highway construction has not reached prewar levels in the face of a need that greatly exceeds that of prewar years. If this condition continues it will be a matter of serious concern to machinery manufacturers, contractors and all highway users."

As some of the "few cheerful spots in the picture", General Fleming stated the opinion that construction costs may be beginning to level off. Road-building materials are becoming more plentiful. Labor costs are still high, but there are new efficiencies from improved construction machinery. Also, the last-minute passage by the recent Congress of the Federal Highway Act of 1948, which continues the Federal highway program, at a slightly reduced ratio, through the fiscal years of 1950 and 1951, with available Federal appropriations



where 330 exhibitors displayed over 8000 pieces of road construction and maintenance equipment valued at $25,000,000

Better Highways

Highlights of convention speeches:

"Truck traffic increasing more than any other"

"Highways must be planned for expected load"

"The nation's highways are now 20 years behind"

"Immediate need for Federal aid . . . $22 billion"

of $450,000,000 for each year, when matched dollar for dollar by state funds; and like state funds also are available to keep this program going through the present fiscal year.

"In the event of another war," he concluded, "the demands on our highway transportation system will exceed anything we have experienced in the past . . . If we are lucky and war does not strike, the effort (in needed highway construction) will not be wasted. We will have developed a system of improved highways that will serve the Nation for years to come."

Federal Aid Needs $22 Billion

W. W. POLK, Illinois Chief Highway Engineer, speaking for President R. H. Baldock of the American Assn. of State Highway Officials, emphasized the broad teamwork necessary to keep this national highway improvement program going. "Included in the complete road building team," said he, "are the federal government, the states, the counties, township and road districts, municipalities, the contractors, equipment manufacturers and distributors, and all producers and distributors of materials used in road construction."

He made the job ahead look very large when he declared that the recent investigation by the Association of national highway needs, based on estimates made by the individual states, "indicated that the work which should be done immediately on the Federal-aid highway system alone would cost approximately $22,000,000,000. This estimate assumes only the correction of those deficiencies on the Federal-aid system which should be remedied immediately. It does not include the correction of deficiencies on roads other than those in the Federal-aid system, nor does it include all of the reconstruction necessary in future years."

One of the stated national road-building problems is an estimated shortage of 10,000 professional and sub-professional engineers in State highway departments. This is because many engineers have left such employment, and young men taking college engineering courses seemingly are not attracted by such jobs.

Nine Surveys In Progress

AS proof of the interest of the states, many of them now are making studies of their complete highway needs. Nine such surveys are in progress or completed. Six, including the District of Columbia, have made some start or previous progress. Eight states have authorized such surveys through their legislatures, and eight other state surveys have been authorized by administrative directives. Only 12 states are reported as "having no immediate highway improvement action plans."

Another highway improvement activity was reported by Paul B. Rynning, chairman of the ARBA County Highway Officials' Division. Attempts have been made to set up uniform national construction standards for county roads and bridges, but the plan has not proved workable because of the highway variable local factors

(TURN TO PAGE 232, PLEASE)

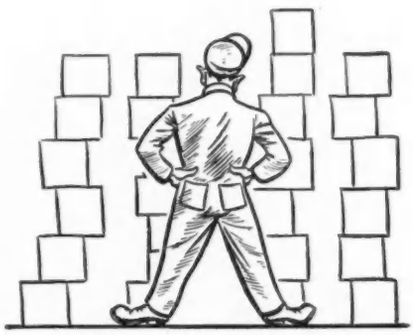
Time Out for PLAY

by BORIS RANDOLPH

DON'T PEEK

But solutions will be found on page 80

Mental Dynamite



Sixty cases of explosives, each one foot square, were unloaded from a truck and stacked four high and four wide against a wall on the floor of a warehouse. The pile was kept as square as possible, and then, as a safety measure, every exposed surface was painted red. A few days later another truck picked up the load and delivered it to its destination. Not knowing why some of the cases had one side painted red; others, two; still others, three; while some had no paint on them at all, the man who received the merchandise had it stacked in four separate piles according to the amount of color on each case. Can you tell how many cases went into each pile?

Power into Miles

Beginning with the word POWER below, change one letter at a time and form a new word each time until you reach the word MILES.

P O W E R

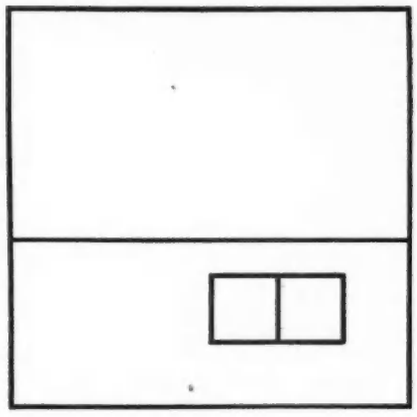
A boatman ..... - - - - -

Natives of Warsaw.. - - - - -

Beauty spots ..... - - - - -

M I L E S

A Square Deal



A truck driver, doodling in a phone booth while talking to his boss, drew the following figure containing 3 squares—a big one and 2 little ones side by side. Then he drew the line above the 2 little squares, and as the conversation came to a close, drew 3 more lines. These last three lines gave him 18 squares of various shapes and sizes. Can you duplicate them in the figure below?

Find The Tools

Tools are sometimes hard to find—even in print. Can you, for instance, find the ones below? Just unscramble the letters for the name of each tool. Example: A S W can be unscrambled and rearranged to spell SAW.

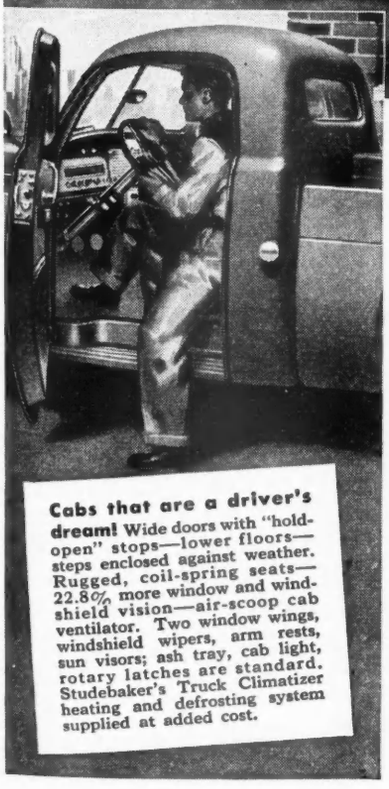
1. A E G G U
2. C E H N R W
3. C D E E I R R R S V W
4. E I L P R S
5. D E E L R W

Truckades

Last month we introduced you to Truckades — old-fashioned charades in truck clothing. For instance: Nourished . . . plus atmosphere . . . plus a man's name . . . equals FED-AIR-AL or Federal. Let's see what you can do with these:

1. An exclamation . . . plus a type measure . . . plus a large body of water . . . equals.....
2. A figure like an X . . . plus a meadow . . . equals.....
3. A power of the mind . . . plus comfort . . . equals.....

World's newest trucks!
NEW 1949 STUDEBAKERS



Cabs that are a driver's dream! Wide doors with "hold-open" stops—lower floors—steps enclosed against weather. Rugged, coil-spring seats—22.8% more window and windshield vision—air-scoop cab ventilator. Two window wings, windshield wipers, arm rests, sun visors; ash tray, cab light, rotary latches are standard. Studebaker's Truck Climatizer heating and defrosting system supplied at added cost.

New in design! New in exclusive features!

THIS handsome, husky, new 1949 Studebaker truck is more than a breath-taking new style.

It's a revolutionary change for the better in truck engineering!

It's a truck that's a stand-out example of the star-studded new Studebaker super line for '49—the easiest trucks to drive and to service that ever wheeled a load.

These sensational 1949 Studebaker trucks are new through and through—even the way they ride is a delightful new experience in relaxed comfort.

They're the world's first trucks with a new kind of "lift-the-hood" accessibility—no standing on a box to get at the engine or ignition—no fumbling under the dash panel to service the instruments or accessories.

Studebaker dealers all over America are proudly showing this 1949 super line of trucks right now.

More truck models than Studebaker ever offered before! An extensive new range of sizes and wheelbases!

STUDEBAKER TRUCKS

NOTED FOR LOW COST OPERATION

Answers to Time Out for Play

(See page 78)

Miles from Power

POWER
POLER
POLES
MOLES
MILES

Truckades Aids

1. GEE — EM — SEA or GMC
2. CROSS — LEA or Crosley
3. WILL — EASE or Willys

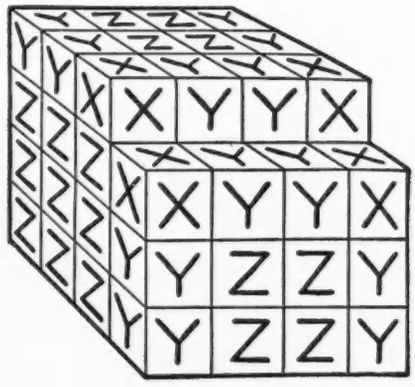
Here Are The Tools

1. Gage
2. Wrench
3. Screwdriver
4. Pliers
5. Welder

Mental Dynamite

Eighteen cases went into the pile that had no paint at all, 26 cases into the pile that had only one side painted, 12 cases into the pile that had two sides painted, and 4 cases into the pile that had three sides painted. Here's why:

Since the pile had 60 cases, was four high and four wide against the wall, and was made as square as possible before it was painted, it had to look like this:



Only the exposed surfaces were painted, so the sides on the floor and against the wall received no paint.

The cases marked x had three sides exposed.

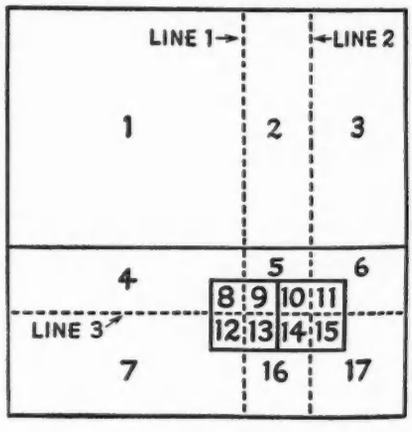
The cases marked y had two sides exposed.

The cases marked z had one side exposed.

The rest of the cases had no sides exposed.

The right hand (invisible) side of the pile, as illustrated above, must, of course, be assumed to duplicate the left (or visible) side.

The Square Deal



The three new lines are indicated on drawing above. In addition to the three squares he started with, our doodler now has the squares marked 1, 8, 9, 10, 11, 12, 13, 14 and 15. That makes a total of 12. The remaining six are made up as follows:

Sect. 1, 2, 4, 5, 8, 9 and 10
Sect. 5, 9 and 10
Sect. 15 and 17
Sect. 8, 9, 12 and 13
Sect. 9, 10, 13 and 14
Sect. 10, 11, 14 and 15

When It Comes To Your Automotive Distributor

Old Friends Are Your Best Friends!

You Can Always Depend On Your Friendly TOLEDO Distributor

Your Toledo Distributor is interested in helping build *your* business. He is not in competition with you—he does no retail repair work himself—his many services are yours solely to help you bring more repair work into *your* shop.

Just as in the past, you can continue to depend on your Toledo Distributor in the future. Take advantage of his many business-building services. He extends you friendly credit. He carries a *complete* line of parts for *all* cars. He offers you technical service to help you on "tough" jobs. He provides machine shop service to help you on "out-of-shop" work. His stock of shop equipment and accessories is selected with care to provide those items you regularly need. He gives you business tips—advises you on successful merchandising programs. And most important, he offers you all this helpful service under one roof!

Yes, when it comes to your automotive distributor, old friends are your best friends. Continue to depend on your Toledo Distributor—let him help build *your* business!

The TOLEDO
STEEL PRODUCTS COMPANY
TOLEDO, OHIO, U.S.A.
Since 1906—Makers of Fine Automotive Parts

DETROIT DISPATCH

Nash Cancels Fleet Discount . . . . Ton-Mile Tax Backfires . . . . Personality and Accidents

High-Compression Engine Progress . . . . Military Truck Orders . . . . Automatic Transmissions

by LEN WESTRATE

CCJ Detroit News Editor

Nash Cancels Discount

Nash Motors has followed the lead of Ford and General Motors in eliminating fleet buying agreements. Nash probably will follow the lead of the other companies in replacing the original agreement with a new one, minus fleet discounts and coverage on individually-owned vehicles. It is reported that fleet discount agreement had cost General Motors over $5½ million this year before it was terminated early in June. Nash currently is producing about 175 knock-down trucks and 50 cabs job a month for the export market. The truck is powered with the Ambassador 112 hp engine and is said to be giving excellent performance. It is reported the company is hoping to supply its dealers with trucks to be used as service vehicles. Production for the domestic market, however, is not expected until the first of next year at the earliest because of the steel shortage.

"Ford Truck Times"

Ford Motor Co. has started publication of a bi-monthly booklet called "Ford Truck Times" that will be distributed through Ford dealers to truck operators and drivers. It is a 7 in. by 5 in. pocket magazine similar in appearance to the Ford Times, which goes to passenger car owners. Distribution will be in excess of two million copies.

Ton-Mile Backfire

A report from Oregon says the ton-mile tax instituted in that state last year is not working out satisfactorily and it may be repealed at the 1949 legislature session. During the first four months of this year fees from all classes of trucks dropped to $1,221,804, compared with $1,864,381 during the same period of last year.

6344 Military Trucks

Final details of purchase agreements for military type trucks were expected to be completed in late July by Army Ordnance Association. The department of national defense appropriation bill approved by the President includes authorization to buy 6344 military type trucks. Currently, Navy and Air Forces trucks also are purchased through Army Ordnance.

Reduced Speeds Pay off

A large Washington state operator, Lee & Estes, Inc., has found that lower truck speeds result in material savings and operating costs without a noticeable slowing of service. After two years operation under the state law which limits truck speeds to 40 miles per hour, the company finds that lower maintence costs and greater safety result from the moderate speed limit.

Accident Rate Higher

One possible reason for higher insurance rates in the motor truck industry: ICC reports that the motor carrier accident rate in May of this year was 5 per cent higher than for the same month in 1947.

Maybe Its Your Personality

If you have one or more drivers who bash in radiators and crumple fenders much more frequently than others it may be their personality at fault rather than bad eyesight or poor judgment. Northwestern University psychologists after an intensive survey of bus drivers with both good and bad safety records have found that certain personality types are more accident prone than others. Characteristics of drivers with worse safety records were found to be tendency to decide things on the spur of the moment, and liking for tall stories and parties at which there is a lot of loud fun. Also they are found to have a ready unreasoned retort when their work is criticized. They believe themselves to be physically stronger than others of their size, become angry easily, and at one time thought of running away from home. Attributes of the safe driver, according to the study, is that he will stick with a lost cause, think a great deal about himself and his plans, and wear himself out by working too hard. His clothing style is conservative, he analyzes problems thoroughly before undertaking them, and enjoys spending an evening alone. It also was found from examining the employe's records that the accident prone group received a large number of poor driving reports, were guilty of company rule violations, and had more unexcused absences.

Dealer Discount Quandry

Although other automobile companies have indicated they have no plans to follow Ford and reduce dealer discounts in the event of further price rises, a subtle hint heard here and there within the industry may be a clue that such action may be taken sometime in the future. Dealers as a body are making much greater profits than the companies that manufacture the products. Some observers agree, however, that with competition keener in the truck field than it is in passenger car sales, dealer discounts on trucks may not be altered.

H-C Engine Progress

High compression engines for automobiles and trucks are not coming right away, but all major manufacturers are doing experimental work in that direction. A report states that Ford currently is undertaking a long range experimental program aimed at converting the present line of engines to valve-in-head design. Such a move would indicate the company's interest in eventual adoption of high compression engines. With its V-8 line, Ford is advantageously situated to move in that direction since the trend is all toward shorter engines with resultant greater rigidity to withstand the heavier stresses of high compression.

Black Market Study

Actually what percentage of total automobile production winds up in the black market? One of the larger companies is considering making a thorough survey across the country to determine as closely as possible actually what the percentage is. However, cost of such a project is considerable and at last reports no action had been taken. If the plan eventually is carried out, registrations will be checked to determine how many new cars are resold by original buyers after 30, 60, and 90 days.

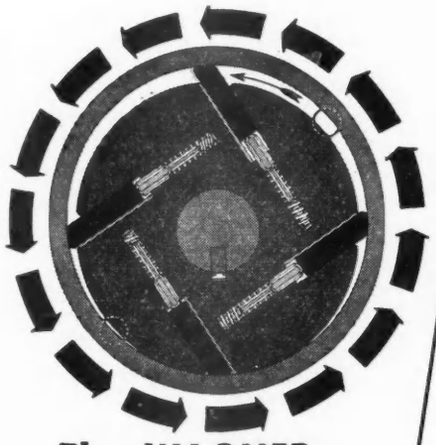
Automatics Waste Fuel

In the opinion of one Detroit automotive engineer, one of the principle reasons the lower priced automobiles have not adopted automatic transmissions is the resultant reduction in fuel economy with currently available types. He says that present automatics are power-wasters, likely to cause a loss of two to three miles per gallon in gasoline mileage. This characteristic, he adds, does not apply to the automatic overdrive, nor to devices which merely shift gears automatically when no fluid coupling is involved.

(TURN TO PAGE 84, PLEASE)

6 Years . . . Over 260,000 miles
with no interruption in service . . . for Unit equipped with

Wagner Air Brakes



The WAGNER Rotary Air Compressor

Check these features that are so desirable in Automotive Air Brake Systems: Rotary motion of all moving parts . . . In running balance at all times . . . Longer belt life due to more uniform torque loading . . . Low friction losses —therefore high operating efficiency . . . A predetermined air pressure range automatically maintained . . . Operating parts are lightly stressed, thereby insuring long life and low maintenance cost . . . Extremely quiet in operation . . . Self-contained oiling system—uncontaminated by engine waste products . . . Compact—requires minimum installation space . . . Low operating temperature prevents carbon formation in the compressor and delivery lines . . . Adaptable to all types of automotive systems.

PUGET SOUND POWER & LIGHT COMPANY

Wagner Electric Corp.
1918 1st Ave. South
Seattle, 4, Wash.

Att: Mr A. P Nelsen

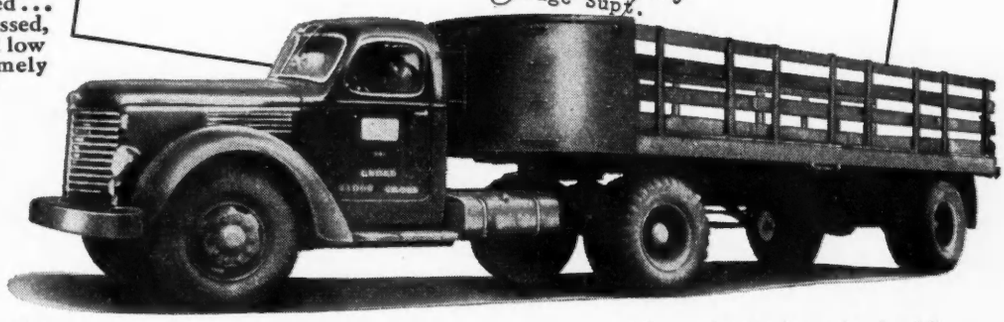
Gentlemen:

It occurred to me you would be interested in the performance of an AF1001 Wagner Rotary compressor used since April 15, 1941 on a KS8 1941 International Harvester tractor. This tractor pulls a 24 foot semi-trailer over all types of roads here in Western Washington, hauling all kinds of line material, heavy transformers and other apparatus to jobs located in many off-the-highway places. Needless to say, thoroughly dependable air brakes such as Wagner builds are "a must".

It is a pleasure to report that, as of April 1st 1947, the Wagner compressor has operated for over 260,000 miles with no interruption in service. We replaced the inexpensive control valve diaphragm twice during all that mileage and then did not lay the compressor up. Such performance you may be assured, is a real relief and satisfaction to both driver and superintendent.

Very truly yours

Wm. J. Stanaway
Garage Supt.



Wagner Electric Corporation
6470 PLYMOUTH AVE., SAINT LOUIS 14, MO., U. S. A.

The enthusiastic praise in this unsolicited letter is typical of what users say about Wagner Air Brakes—The only Air Brakes that have the famous Rotary Air Compressor.

These outstanding air brakes can help you, too, in lowering your brake maintenance costs. Get complete information today. Write for Bulletin KU-50B.

Wagner Electric Corporation
EST. WE 1891

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID · NoRol
CoMoX BRAKE LINING · AIR BRAKES · TACHOGRAPHS
ELECTRIC MOTORS · TRANSFORMERS · INDUSTRIAL BRAKES

The System With The Rotary Compressor

K48-3

Detroit Dispatch

(CONTINUED FROM PAGE 82)

Military Not Steel Threat

The automotive industry does not expect the military defense program to have any material effect on steel supply this year barring a military crisis. It is believed that in the normal course of events it would take several months to complete design of new combat vehicles and other military equipment and to tool up for any sizeable production.

All Tire Prices Up

All major tire companies now have increased prices on passenger car and truck tires and inner tubes. Increases on passenger car tires averaged 4½ to 6 per cent, truck tires about 5 per cent, and farm tractor and implement casings from 6 to 7½ per cent. Inner tubes are up an average of 6 per cent.

Ford Test Building

Construction will be completed in September on the first wing of a new dynanometer building being built by Ford. The wing is only part of the T-shaped building, which will be devoted to engine testing equipment. The dynanometer building is the first unit of the projected engineering and research center announced by Henry Ford II, company president, in June, 1946.

Farmers Still King

Importance of the farm market is revealed in a study made by Studebaker Corporation showing distribution of its 1947 truck sales. Farmers purchased 19.8 per cent of all trucks made by the company last year, the survey indicates. Contractors were next with 12.6 per cent. Garages and service stations and general truckers were next in line with 6.7 and 6.2 per cent respectively.

Tucker Drops Out In Canada

Tucker Corporation has closed the offices of Tucker Corp. of Canada, Ltd. at Toronto. The company spokesman said the move was made because of excessive taxes on importation of automobiles. He added that the company has returned $8,000 paid for Tucker franchises and that the office will stay closed until the Canadian government modifies its import regulations on complete automobiles.

STATE EQUIPMENT REQUIREMENTS

New laws enacted in four states governing motor vehicle equipment reveal a trend toward uniformity of regulation, a survey by the National Highway Users Conference discloses. Safety glass is required in all new vehicles as well as for all replacement of glass in Kentucky after Jan. 1, 1949, under a recently enacted measure.

Mississippi code provisions relating to vehicle headlights and clearance lights have been extensively revised by a law which requires all clearance or side marked reflectors or lamps to be amber in color if located on the front or side and red if located on the rear.

Current New York laws include a measure which requires replacement, with safety glass, of any glass so broken, fractured or discolored as to distort visibility. Use of safety glass is now required in all replacement of glass in doors, windows or windshields. A red flag 24 in. square is required on all loads extending four or more feet beyond a vehicle, with a red light visible for 500 ft required at night in lieu of the flag. Another recent law in the Empire State requires two reflectors so placed as to indicate the width of every tractor of more than 70 in. in width. Every motor vehicle must now be equipped with a mirror so adjusted that the operator of such vehicle shall have a clear and full view of the road and traffic behind such vehicle. Carriers of explosives must have in large white lettering on the front and back of vehicles used for such transportation, the word "explosives," according to another recently enacted law in New York.

A new law in South Carolina requires maintenance, in good condition, of motor vehicle equipment, including clearance, side-marker, and stop lamps, with reflectors required on the front, side and rear of every bus or truck 80 or more in. in width. Reflectors must be mounted not more than 60 nor less than 24 in. from the ground, while vehicles not operated at night need not be equipped with lights or reflectors.

Quiz Answers

(CCJ Quiz on p. 69)

1. b. It is safest to pull on the wrench. If you push on the wrench and the nut breaks loose suddenly, you are liable to be nursing some badly skinned knuckles.

2. c. Phillips screwdriver. Screws like this are used especially on mouldings and other trim. The screwdriver can't slip out sideways and scratch the finish.

3. d. Drill a hole down through the center of the stud. Then lightly tap a diamond-point chisel into the hole. The chisel and the broken stud can then be backed out with the wrench. A regular stud extractor especially designed to do this job is better, of course.

4. b. The rounded end is the "peen." The hammer itself is called a "ball-peen" hammer. It is used principally for riveting.

5. d. A torque wrench. Some torque wrenches have a dial and a pointer that indicates the amount of force being applied. On others, you set the dial for the force desired, and a light flashes when that force has been reached. A specified degree of tightness is required on cylinder head nuts and on main or connecting rod bearing caps.

6. d. The meter, legalized in 1866. The inch, foot, and yard are units of the English system of measurement.

7. b. It indicates the spacing of the teeth and represents a coarseness between "coarse" and "second-cut."

8. b. A "mike" is a micrometer caliper. It measures in thousandths of an inch. It is used for measuring the wear on piston pins, valve stems, and other engine parts.

9. b. A "starting punch" is used first, and then a "pin punch" is used to finish the job.

10. a. False. On harder metals, the number of strokes per minute should be reduced or you are liable to ruin the temper of the blade.
    b. True.
    c. False. The sides of the blade should be practically parallel.
    d. True.
    e. True. Use a wrench.

ATA STUDIES INSURANCE PROBLEMS

ATA has set up an ATA National Insurance Advisory Committee to work on the trucking industry's insurance problems. This committee is now at work and has several subcommittees, composed of industry and insurance company representatives which are involved in setting up minimum safety standards for the motor carriers, with particular reference to insurance rates.

Pick-Up Trailer For 1/2-Ton Trucks

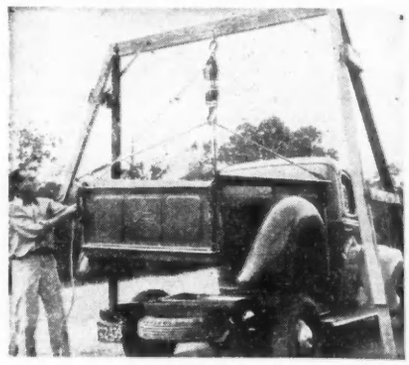
A light "conventional-type" semi-trailer has been developed to haul payloads up to 5 tons, that can be handled by a pick-up truck or a Jeep. Designed for utility, the new Mustang aluminum semi-trailer is ⅔ lighter than steel and reportedly 20 per cent stronger than materials commonly used in trailer construction. The semi-trailer, including tires, and fifth-wheel, weighs 1850 lb.

The actual payloads that can be efficiently carried by this trailer depends upon the size pick-up truck used for power. A 1 ton pick-up can haul up to 10,000 lb on a Mustang; ¾ ton, 8000 lb; ½ ton, 6000 lb and a universal Jeep 5500 lb.

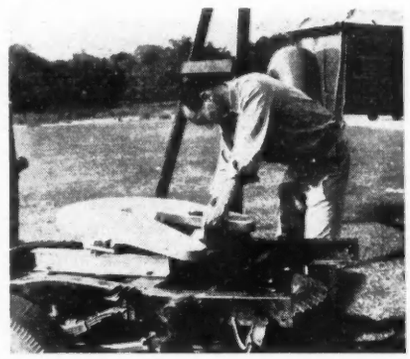
In a short time, one man can convert a pick-up truck into a ton and a half carrier by snapping on a Mustang Trailer. The Mustang semi-aluminum trailer was developed, and is now being mass produced by the Texas Sheet Metal & Mfg. Co., Dallas, Texas.

Only four steps are necessary in connecting pick-up to a 1½-ton carrier.

1. The bolts in the bed of the truck are removed by the operator.



2. The truck bed is lifted off with a block and tackle fastened to an "A" frame, a beam in a garage, or the limb of a tree.



3. The truck is driven out from under the bed and the fifth-wheel fastened to the chassis with four bolts.

4. The front section of the semi-trailer, when not in use, is supported by a landing gear. The fifth-wheel is then backed under the trailer, the brake and electric lines snapped on.

In addition to mass producing the standard Mustang aluminum semi-trailer, the Texas Sheet Metal and Manufacturing Company recently added a new completely enclosed 600 cu ft Van model to meet the growing demand for a lightweight semi-trailer of this type. The flat bed is the same exclusive, strong, lightweight construction as a standard Mustang. Sides are all steel, with pressed steel bow roof construction. Straight wall height is 6 ft center roof height 6 ft 7 inches. Floor area is approximately 103 sq ft. The empty weight is only 2800 lbs. . . . making it possible to pull this Van with a pick-up truck for greater utility and economy.

Truck Specifications Table

OF CURRENT PRODUCTION MODELS

DATA SUPPLIED BY MANUFACTURERS AND TABULATED BY

COMMERCIAL CAR JOURNAL

Key to Definitions, References and Abbreviations

DEFINITIONS

MAKE AND MODEL
Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Converted Ford or Chevrolet Model.

(2) International Harvester—Specifications shown represent only the basic standard chassis units and standard chassis ratings in keeping with definitions established by Commercial Car Journal. Optional units not shown such as engines, clutches, transmissions, axles or axle ratios, brakes, wheels and tires, frames or frame reinforcements, optional wheelbases or any other units which make up part of the truck chassis and which International will furnish and approve from the factory as optional equipment can or will change either the ratings, chassis weight shown or performance of the truck as indicated by this list.

Also the company reserves the privileges of assigning special gross vehicle ratings for any chassis providing in the opinion of its engineering department, the type of service justifies the new rating without decreasing the safety factor designed into the truck.

(a)—Available with Two-Speed Axle designated KBS Models.

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
H—Hotchkiss.
Her—Hercules.
L—Lockheed.
LH—Lockheed front, Wagner "hi-Tork" rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Spicer
T or Tim—Timken.
Tw—Timken-Westinghouse
TW—Timken-Wisconsin.
WG—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Wg—Wagner.
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE

Location

4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External.

Operation

A—Air.
H—Hydraulic.
V—Vacuum.
D or Dp—Dual Primary

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Cc—Composite Front, Cast Iron in rear.
Ce—Centrifuse.
Cl—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.
Z—Reinforced (X) member frame, box type sections.

REAR AXLE

Final Drive and Type

B—Bevel.
CD—Chain Drive
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
¾—Three Quarters Floating.
½—Semi-Floating
T—Torque Tube

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

(Turn to Page 92, please)

(Continued from Page 91)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders; Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
1	Available																													
2	(c.o.e.)....200				15000	5500●	7.00/20D	8.25/20	Wau BM	6–3⅝x4¼	263	5.9	178	78–2800	7–2⅝x10¼	N	WG T9	4	Tim E100DPH	HF	H	** –6.20	Tim 32502H	L4IHV			a	TX		10x3x¼	T
3	(c.o.e.)....225				16500	6200●	7.50/20D	8.25/20	Wau BZ	6–4x4¼	320	5.9	235	105–3200	7–2⅝x10¼	N	WG T97	4	Tim E100DPH	HF	H	** –6.20	Tim 32502H	L4IHV			a	TX		10x3x¼	T
4	(c.o.e.)....250				20000	6400●	8.25/20D	9.00/20	Wau BZ	6–4x4¼	320	5.9	235	105–3200	7–2⅝x10¼	N	Fu 5A330	5	Tim H100DPH	HF	R	** –6.80	Tim 32502H	L4IHV			a	TX		10x3x¼	T
5	(c.o.e.)....400				22000	6800●	9.00/20D	10.00/20	Wau BZ	6–4x4¼	320	5.9	235	105–3200	7–2⅝x10¼	N	Fu 5A330	5	Tim L100DPH	HF	R	** –6.83	Tim 35000H	L4IHV			a	TX		12x3x¼	T
6	(c.o.e.)....500				23000	7500●	9.00/20D	10.00/20	Wau MZA	6–4¼x4¾	404	5.6	285	130–3000	7–2⅝x12½	Y	Fu 5F430	5	Tim L100DPH	HF	R	** –6.83	Tim 35000H	L4IHV			a	TX		12x3x¼	T
7	(c.o.e.)....550				28000	8100●	10.00/20D	11.00/20	Wau MZA	6–4¼x4¾	404	5.6	285	130–3000	7–2⅝x12½	Y	Fu 5F430	5	Tim Q100DPH	HF	R	** –7.80	Tim 26452H	L4IHV			a	TX		12x3x¼	T
8	(c.o.e.)....550 X				32000	9600●	10.00/20D	11.00 24	Wau MZA	6–4¼x4¾	404	5.6	285	130–3000	7–2⅝x12½	Y	Fu 5F430	5	Tim S200DPH	2F	R	** –7.84	Tim 26452H	L4IHV			a	FL		14x3x⅞	T
9	(c.o.e.)....600				28000	10000●	10.00/20D	11.00/24	Wau 140 GK	6–4½x5½	525	6.4	425	172–2600	7–3¼x13⅞	Y	Fu 5A650	5	Tim R100P	HF	R	** –7.40	Tim 26452TW	L4IA			a	FD		14x3x⅞	T
10	(D) (c.o.e.)....601				28000	10900●	10.00/20D	11.00/24	Wau 145 GK	6–5¼x6	779	6.2	595	240–2400	7–3½x17¾	Y	Spi 7851	4	Tim R100P	HF	R	** –7.40	Tim 26452TW	L4IA			a	FD		14x3x⅞	T
11	(D) (c.o.e.)....602				28000	11200●	10.00/20D	11.00/24	Cum HB600	6–4⅞x6	672	17.500		150–1800	7–4½x16½	Y	Spi 7851	4	Tim R100P	HF	R	** –7.40	Tim 26452TW	L4IA			a	FD		14x3x⅞	T
12	Biederman...NSH		130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6–4x4½	339	6.9	272	131–3200	7–2½x10¼	N	Fu 5A330	5	TimH700DPH	SF	H	** –7.2	Tim 35000HX	LH4IH	514	744	G	T	60	9x3x¼	C
13	.....NSD		130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6–4x4½	339	6.9	272	131–3200	7–2½x10¼	N	Fu 5A330	5	TimH700DPH	2D	H	6.13–8.15	Tim 35000HX	LH4IH	514	744	G	T	60	9x3x¼	C
14	Chevrolet.....FP	835	116	....	4600	▼2590	6.00/16S	15S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	3	Own	Hy½	T	** –4.11	Own	O4IH	159	242	Co	2I	39	5¾x2¼x⅜	C
15	.....FR	945	125	....	♦5800	▼2935	15S	7.00/17S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	3	Own	HyF	H	** –4.57	Own	O4IH	178	272	Co	2I	48¼	5¾x2¼x⅜	C
16	.....FS	1025	137	....	8800	▼3170	7.00/17S	7.00/18	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	4	Own	HyF	H	** –5.14	Own	O4IH	243	371	Co	2I	60	7x2¾x⅜	C
17	.....RJ	1100	137	....	12500	▼3620	7.00/20S	7.50/20	O-Thrift Mas.::	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60	7x2¾x⅜	C
18	.....RK	1135	161	....	12500	▼3740	7.00/20S	7.50/20	O-Thrift Mas.::	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84	8⅛x2⅞x¼	C
19	(School bus).RL	1280	161	....	12000	▼4120	6.50/20D	7.00/20	O-Thrift Mas.::	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	....	8⅛x2⅞x¼	C
20	.....RVS	1470	137	....	15000	▼4230	7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60	8⅛x2⅞x¼	C
21	.....RWS	1505	161	....	15000	▼4290	7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84	8⅛x2⅞x¼	C
22	(c.o.e.).....RPS	●1825	110	....	15000	.....	7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	–6.17	Own	O4IH	330	478	Co	2I	60½	8⅛x2⅞x¼	C
23	(c.o.e.).....RRS	●1860	134	....	15000	.....	7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	–6.17	Own	O4IH	330	478	Co	2I	84½	8⅛x2⅞x¼	C
24	(c.o.e.).....RSS	●1895	158	....	15000	.....	7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	–6.17	Own	O4IH	330	478	Co	2I	108½	8⅛x2⅞x¼	C
25	(c.o.e.).....RP	●1825	110	....	16000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60½	8⅛x2⅞x¼	C
26	(c.o.e.).....RR	●1860	134	....	16000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84½	8⅛x2⅞x¼	C
27	(c.o.e.).....RS	●1895	158	....	16000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	108½	8⅛x2⅞x¼	C
28	.....RV	1479	137	....	16000	▼4230	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60	8⅛x2⅞x¼	C
29	.....RW	1505	161	....	16000	▼4290	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84	8⅛x2⅞x¼	C
30	(School bus).RX	1550	199	....	15000	▼4715	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4□	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	....	8⅛x2⅞x⅜	C
31	Corbitt■.....18BG		181	....	18000	.....	9.00/20	10.00/20	Con M6330	6–4x4⅛	330	6.1	246	104–2800	7–2⅛x12	Y	Cla 205V	5	TimH100DPH	....	H	**–5.29	Tim 32502H	B4IHV			a	TX		8x3¼x¼	T
32	.....22BG		190	....	22000	.....	10.00/20	10.00/22	Con B6371	6–4½x4⅝	371	6.0	280	100–2600	7–2⅛x13½	Y	Fu 5A43	5	Tim L100DPH	....	H	**–5.29	Tim 35000H	B4IHV			a	TX		8x3¼x¼	T
33	.....25BG		200	....	25000	.....	10.00/22	11.00/22	Con B6427	6–4△x4⅞	427	5.9	325	127–2600	7–2⅛x13½	Y	Fu 5A43	5	Tim Q100P	....	H	**–6.17	Tim 35100TW	Ws4IA			a	TX		8¼x3¼x¼	T
34	(T).....18TG		137	....	18000	.....	9.00/20	10.00/20	Con M6330	6–4x4⅜	330	6.1	246	104–2800	7–2⅝x12	Y	Cla 205V	5	Tim H100P‡‡	....	H	**–5.29	Tim 32505TW	Ws4IA			a	TX		7¾x3¼x¼	T
35	(T).....H18TG		137	....	18000	.....	10.00/20		Con M6330	6–4x4⅜	330	6.1	246	104–2800	7–2⅝x12	Y	Cla 205V	5	Tim L100P‡‡	....	H	**–5.29	Tim 32505TW	Ws4IA			a	TX		7¾x3¼x¼	T
36	(T).....22TG		144	....	22000	.....	10.00/20	10.00/22	Con B6427	6–4△x4⅞	427	5.9	325	127–2600	7–2⅛x13½	Y	Fu 5A43	5	Tim L100P‡‡	....	H	**–5.29	Tim 35000TW	Ws4IA			a	TX		8x3¼x¼	T
37	(T).....H22TG		144	....	22000	.....	10.00/22		Con B6427	6–4△x4⅞	427	5.9	325	127–2600	7–2⅛x13½	Y	Fu 5A43	5	Tim Q100P‡‡	....	H	**–5.29	Tim 35100TW	Ws4IA			a	TX		8x3¼x¼	T
38	(T).....25TG		148	....	25000	.....	10.00/22	11.00/22	Con R6513	6–4½x5½	513	5.9	400	170–2600	7–3¼x—	Y	Spi 6253	5	Tim Q100P‡‡	....	H	**–6.17	Tim 35100TW	Ws4IA			a	2	....	8¼x3¼x¼	T
39	(T).....H25TG		148	....	25000	.....	10.00/22		Con R6513	6–4½x5½	513	5.9	400	170–2600	7–3¼x—	Y	Spi 6253	5	Tim R100P‡‡	....	H	**–6.17	Tim 35100TW	Ws4IA			a	2	....	8¼x3¼x¼	T
40	(T).....28TG		147	....	28000	.....	10.00/22	11.00/24	Con R6602	6–4⅞x5½	602	5.9	484	199–2600	7–3¾x—	Y	Fu 5A650	5	Tim S200P‡‡	....	H	**–6.42	Tim 26450TW	Ws4IA			a	2D	....	8¼x3¼x¼	T
41	(D) (T).....22TD		144	....	22000	.....	10.00/20	10.00/22	Her DWXD	6–4¼x4¼	404	15	320	135–2600	....	Y	Fu 5A430	5	Tim L300P	....	H	6.32–8.20	Tim 35000TW	Ws4IA			a	TX		8x3¼x¼	T
42	(D) (T).....H22TD		144	....	22000	.....	10.00/22		Her DWXD	6–4¼x4¼	404	15	320	135–2600	....	Y	Fu 5A430	5	Tim Q300P	....	H	6.53–8.53	Tim 35100TW	Ws4IA			a	TX		8x3¼x¼	T
43	(D) (T).....25TD		148	....	25000	.....	11.00/20	11.00/22	Her DRXC	6–4⅝x5¼	529	14	400	148–2200	7–3½x13¾	Y	Spi 6253	5	Tim Q300P	....	H	6.53–8.53	Tim 35000TW	Ws4IA			a	2	....	8¼x3¼x¼	T
44	(D) (T).....H25TD		148	....	25000	.....	11.00/20		Her DRXC	6–4⅝x5¼	529	14	400	148–2200	7–3½x13¾	Y	Spi 6253	5	Tim R300P	....	H	6.53–8.53	Tim 35000TW	Ws4IA			a	2	....	8¼x3¼x¼	T
45	(D) (T).....27TD		152	....	27000	.....	10.00/22	11.00/24	Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5A920	5	Tim Q100P‡‡	....	H	5 29	Tim 26450W	Ws4IA			a	2	....	8¼x3¼x¼	T
46	(D) (T).....H27TD		152	....	27000	.....	10.00/22		Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5A920	5	Tim R300P	....	H	4 92–6.42	Tim 26450W	Ws4IA			a	2	....	8¼x3¼x¼	T
47	(D) (T).....28TD		155	....	28000	.....	10.00/22	11.00/24	Cum NHB600	6–5¼x6	743	15	575	200–2100	.....	Y	Fu 5A920	5	Tim S200P‡‡	....	H	6.42	Tim 26450W	Ws4IA			a	2D	....	8¼x3¼x¼	T
48	Crosley.....B		80	....	1180	.....	4.50/12	.....	Own	4–2¼x2¼	44	7.5	33	26–5400	5–♦	..	WG-ASI-T'92	3	Spi	2F	..	** –5.17	Own	Own M	64	72	C	....	....	....	....
49	Dodge.....B-1-B		108	108	4850	.....	6.00/16-S	6.50/16-S	Own T-142	6–3¼x4⅛	217	6.6	172	95–3600	4–2½x4.8	N	NP-39750	3	Own T-142	H½	H	4.1–4.7	Own T-142	O4IH	174	264	Co	TX	40	⅞x2⅛x6½	C
50	.....B-1-C		116	116	5500	.....	TA-15-S	TA-15-S	Own T-144	6–3¼x4⅛	217	6.6	172	95–3600	4–2½x4.8	N	NP-39750	3	Own T-144	H½	H	4.1–4.7	Own T-144	O4IH	184	276	Co	TX	48	⅞x2⅞x6½	C
51	.....B-1-D		116	126	7500	.....	6.00/16S‡	6.00/20	Own T-146	6–3¼x4⅛	230	6.7	184	102–3600	4–2½x4.8	N	NP-39980	3	Own T-146	HyF	H	3 9–4.8	Own T-146	O4IH	212	316	Co	TX	48	⅞x2⅛x6½	C
52	.....B-1-FL		128	192	9500	.....	6.00/20S‡	6.50/20	Own T-148	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-39760	4	Own T-148	HyF	H	5.6–6.8	Own T-148	O4IH	336	479	Cc	TX	60	21x2¾x7	C
53	.....B-1-F		128	192	14500	.....	6.00/20S‡	7.50/20	Own T-148	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-39760	4	Own T-148	HyF	H	5.6–6.8	Own T-148	O4IH	336	479	Cc	TX	60	21x2¾x7	C
54	.....B-1-FA		128	192	14500	.....	6.50/20–D	7.50/20	Own T-148	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-39760	4	Eat A5-1350	SFd	H	5.8–8.1	Own T-148	O4IH	336	479	Cc	TX	60	21x2¾x7	C
55	.....B-1-H		128	192	15500	.....	7.00/20▲	8.25/20	Own TX-148	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-39760	4	Own TX-148	HyF	H	5.6–6.8	Own TX-148	O4IHV	336	479	Cc	TX	60	21x2¾x7	C
56	.....B-1-HA		128	192	15500	.....	7.00 20▲	8.25/20	Own TX-148	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-39760	4	Eat A5-1350	SFd	H	5.8–8.1	Own TX-148	O4IHV	336	479	Cc	TX	60	21x2¾x7	C
57	.....B-1-FM		107	161	14750	.....	6.00/20S‡	7.50/20	Own T-152	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-88070	4	Own T-152	HyF	H	5.6–6.8	Own T-152	O4IH	336	479	Cc	TX	60	⅞x2¾x7	C
58	.....B-1-FMA		107	161	14750	.....	6.50/20–D	7.50/20	Own T-152	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-88070	4	Eat A5-1350	SFd	H	5.8–8.1	Own T-152	O4IH	336	479	Cc	TX	60	⅞x2¾x7	C
59	.....B-1-HM		107	161	15750	.....	7.00/20▲	8.25/20	Own TX-152	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-88070	4	Own TX-152	HyF	H	5.6–6.8	Own TX-152	O4IHV	336	479	Cc	TX	60	⅞x2¾x7	C
60	.....B-1-HMA		107	161	15750	.....	7.00/20▲	8.25/20	Own TX-152	6–3⅞x4¼	236	6.6	192	109–3600	4–2½5.054	N	NP-88070	4	Eat A5-1350	SFd	H	5.8–8.1	Own TX-152	O4IHV	336	479	Cc	TX	60	⅞x2¾x7	C
61	.....B-1-JL		128	212	16500	.....	6.50–20D	8.25/20	Own T-150	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88400	5	Own T-150	HyF	H	6.2–7.1	Own T-150	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
62	.....B-1-JAL		128	212	16500	.....	6.50/20D	8.25/20	Own T-150	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88400	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-150	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
63	.....B-1-KAL		128	212	17000	.....	7.50/20§	9.00/20°	Own TX-150	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88400	5	Eat 6500	SFd	H	6.1–8.5	Own TX-150	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
64	.....B-1-JML		107	161	16750	.....	6.50/20D	8.25/20	Own T-154	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88410	5	Own T-154	HyF	H	6.2–7.1	Own T-154	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
65	.....B-1-KML		107	161	16750	.....	6.53/20D	8.25/20	Own T-154	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88410	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-154	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
66	.....B-1-J		128	212	17250	.....	7.50/20§	9.00/20°	Own TX-154	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88410	5	Eat 6500	SFd	H	6.1–8.5	Own TX-154	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
67	.....B-1-JA		128	212	16500	.....	6.50/20D	8.25/20	Own T-150	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88400	5	Own T-150	HyF	H	6.2–7.1	Own T-150	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
68	.....B-1-KA		128	212	17000	.....	7.50/20§	9.00/20°	Own TX-150	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88400	5	Eat 6500	SFd	H	6.1–8.5	Own TX-150	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
69	.....B-1-JM		107	161	16750	.....	6.50/20D	8.25/20	Own T-154	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88410	5	Own T-154	HyF	H	6.2–7.1	Own T-154	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
70	.....B-1-JMA		107	161	16750	.....	6.50/20D	8.25/20	Own T-154	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88410	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-154	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
71	.....B-1-KMA		107	161	17250	.....	7.50/20§	9.00/20°	Own TX-154	6–3⅞x4½	250	6.6	204	114–3600	4–2½5.054	N	NP-88410	5	Eat 16500 lb.	SFd	H	6.1–8.5	Own TX-154	O4IHV	396	553	c	TX	60	⅞x2⅜x8⅜	C
72	.....B-1-R		130	229	18500	.....	7.50/20D	9.00/20	Own T-156	6–3¾x4¼	281	6.4	225	115–3200	7–3x11.2	Y	NP-88220	5	TimH100DPH	HyF	H	6.8–7.2	Own T-156	O4IHV	396	609	c	TX	60	⅞x2⅜x9⅜	C
73	.....B-1-RA		130	229	18500	.....	7.50/20D	9.00/20	Own T-156	6–3¾x4¼	281	6.4	225	115–3200	7–3x11.2	Y	NP-88220	5	Tim H-300	HFd	H	6.1–8.8	Own T-156	O4IHV	396	609	c	TX	60	⅞x2⅜x9⅜	C
74	.....B-1-T		130	190	21000	.....	7.50/20§	10.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-88450	5	Tim L-100	HyF	H	6.8–7.4	Tim 32516A1	O4IHV	424	666	c	TX	60	¼x3x10	C

(Turn to Page 94, please)

*—Rear only: front 8.25/20.
‡‡—Two speed axles available.
△—Chevrolet own rear axle (5.43:1) available on Models RJ-RK-RL. Chevrolet own 2-speed rear axle (6.13-8.10:1) available at extra cost on Models RV8-RW8-RP-RP8-RR-RR8-R8-R88-RV-RW-RX.
♦—7.50/17 tire is optional for Rear or Front and Rear, with no increase in G.V.W.
‡—Front only: Rear 6.50/20S.
§—7.50/20 can be used on the front with no change in 15000 G.V.W.
::—Own Loadmaster engine available on models RJ-RK-RL at extra cost.
§—Front only; Rear 8.25/20.
‡—Front only; Rear 7.00/16S.
■—Sleeper cab models available in 25-27-28 Series with 25 inch longer wheelbase.
♦—1 Front 1.375x1.312; 3 Center 1.375x.870; 1 Rear 1.500x1.499.
♦♦—Diameter: (Average) Front, 2.6858; Front Center, 2.7168; Rear Center, 2.7478; Rear, 2.7788; Total length, 5⅝.
●—Includes cab.
‡—Front only: Rear 7.50/20D.
▼—Includes spare tire, full fuel tank and cooling system.

(Turn to Page 94, please)

Models RJ-RK-RL. Chevrolet own 2-speed rear axle (6.13-8.10:1) available at extra cost on Models RV8-RW8-RF-RP8-RR-RR8-R8-R88-RV-RW-RX.

—7.50/20 can be used on the front with no change in 15000 G.V.W.

::—Own Loadmaster engine available on models

with 25 inch longer wheelbase.

‡—1 Front 1.375x1.312; 3 Center 1.375x.870; 1 Rear 1.500x1.499.

—Front only: Rear 7.50/20D.

—Includes spare tire, full fuel tank and cooling system.

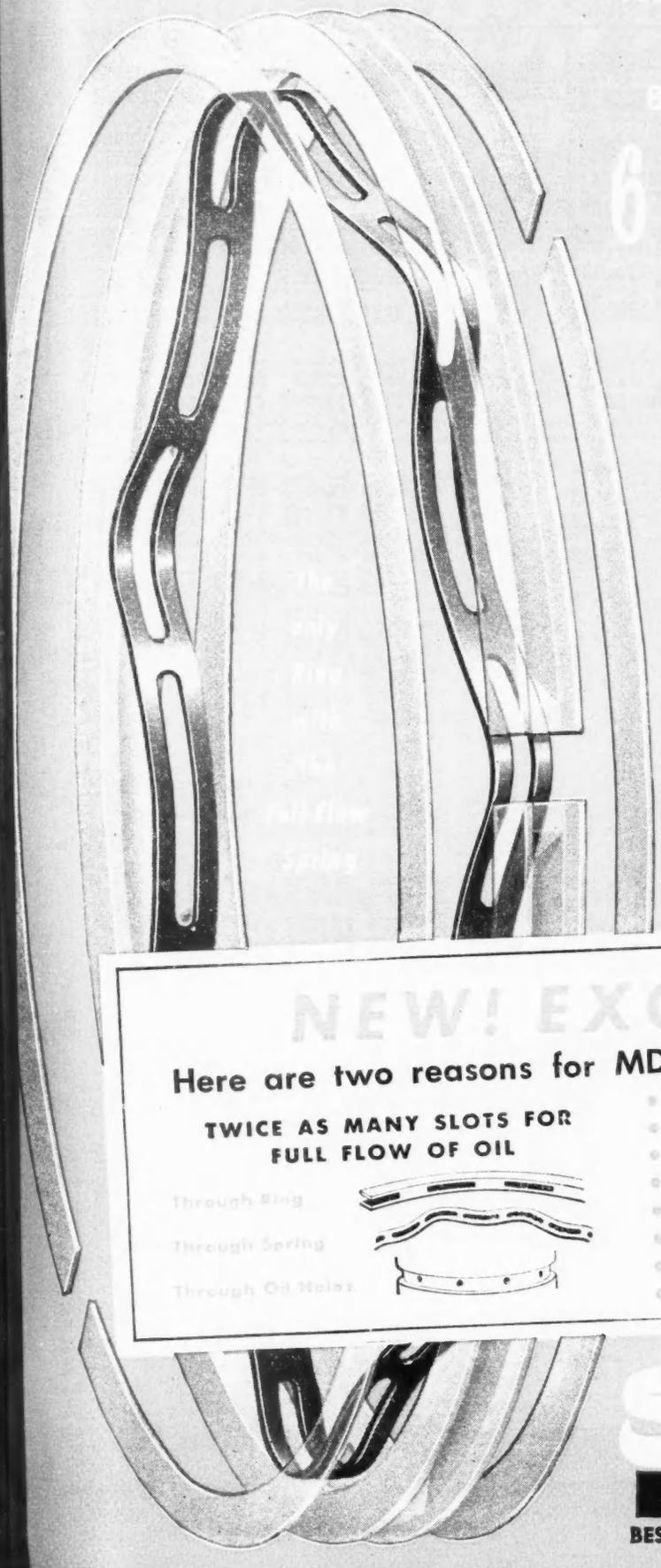
NEW SEALED POWER FULL-FLOW SPRING

Featured in MD-50 STEEL OIL RING

BUILDS SATISFACTION THROUGH

6 exclusive advantages!

1. Improved oil economy
2. More spring action for steel segments
3. Leaves all slots and oil holes open
4. Maintains tension for varied groove depth
5. Greater bearing area for longer life
6. Retains original efficiency for life of ring



Sealed Power "X" Sets — for all popular makes of cars and trucks—feature the MD-50 Steel Oil Ring — THE ONLY RING WITH THE FULL-FLOW SPRING.

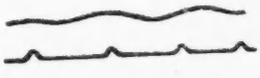
Sealed Power Corporation, Muskegon, Mich.
In Canada: Stratford, Ontario.

NEW! EXCLUSIVE!

Here are two reasons for MD-50's amazing performance:

TWICE AS MANY SLOTS FOR FULL FLOW OF OIL

GENTLE CURVES INSTEAD OF HUMPS



for greater tension flexibility in tapered and out-of-round bores plus greater bearing area for longer spring and ring life.

Sealed Power

PISTON RINGS

BEST IN NEW TRUCKS! BEST IN OLD TRUCKS!

(Continued from Page 92)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	Dodge Cont'd																													
1	.....B-1-TA		130	190	21000		7.50/20▲	10.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-88450	5	Tim L-300	HFd	H	6.3–9.1	Tim 32516A1	O41HV	424	666	c	TX	60	¼x3x10	C
2	.....B-1-V		130	190	23000		9.00/20†	11.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-88450	5	Tim Q-100	HyF	H	6.8–7.8	Tim 35020-NX9	O41HV	485	770	c	TX	60	¼x3x10	C
3	.....B-1-VA		130	190	23000		9.00/20†	11.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-88450	5	Tim Q-300	HFd	H	6.5–9.5	Tim 35020-NX9	O41HV	485	770	c	TX	60	¼x3x10	C
	School Buses																													
4	Dodge..B-1-FS-152		152	192	15000		6.50/20D	7.00/20	Own T-148	6–3 7/16 4x½	236	6.6	192	109–3600	4–2½x5.054	N	NP-39760	4	Own T-148	HyF	H	5.6–6.8	Own T-148	O41H	336	479	Co	TX	.....	21x2¾x7	C
5	.....B-1-JS-212		212	212	17000		7.50/20D	8.25/20	Own T-150	6–3 7/16 x4½	250	6.6	204	114–3600	4–2½x5.054	N	NP-88400	5	Own T-150	HyF	H	6.2–7.1	Own T-150	O41HV	396	553	c	TX	.....	7/8 x2 7/16 x8 1/8	C
6	.....B-1-RS-229		229	229	19000		8.25/20D	9.00/20	Own T-156	6–3¾x4¼	281	6.4	225	115–3200	7–3x11.2	Y	NP-88220	5	TimH100DPH	HyF	H	6.8–8.1	Own T-156	O41HV	396	609	c	TX	.....	1/8 x2 1/16 x9 1/16	C
7	Duplex.....T		136	220	18000	6600	8.25/20D	9.00/20	Her JXD	6–4x4¼	320	6.2	240	113–3000	7–2½x10 1/16	Y	Fu 5B330	5	Tim H100	B	H	•• –7.20	Tim 32502	L41HV	420	654	A	TX	57¼	9½x3½x⅞	C
8	.....TH-404		136	220	18000	6900	8.25/20D	9.00/20	Her WXLC3	6–4¼x4¾	404	5.8	312	139–2600	7–2½x10 1/16	Y	FU-5A430	5	Tim H-300	DF	H	6.13–8.15	Tim 32502	L41HV	420	654	A	TX	57¼	9½x3½x⅞	C
9	.....R		136	220	25000	8820	9.00/20D	10.00/20	Her WXLC-3	6–4¼x4¾	404	5.8	212	139–2600	7–2½x13¼	Y	Fu 5A43	5	Tim Q300	DF	R	6.53–8.53	Tim 35100	L41HV	730	1016	A	TX	49¼	9¼x3½x⅞	C
10	.....JHA		148	220	28000	9800	10.00/20D	11.00/20	Her RXB	6–4½x5⅛	501	5.4	360	137–2400	7–3x14	Y	Fu 5A620	5	Tim S-300	DF	R	6.53–8.53	Tim 26450	Ws41A	912	1311	A	TX	60⅜	10 1/16x3½x⅞	C
11	.....JH-558		148	220	28000	9800	10.00/20D	11.00/20	Her RXLD	6–4½x5⅛	558	6.3	430	154–2400	7–3½x13¼	Y	FU-5A650	5	Tim U-200	2F	R	•• –9.83	Tim 26450	Ws41A	912	1311	A	TX	60⅜	10 1/16x3½x⅞	C
12	.....KHA		148	220	32000	10500	11.00/20D	11.00/20	Her RXC	6–4½x5⅛	529	5.4	395	132–2300	7–3x14¼	Y	Fu 5A620	5	Tim U-200	2F	R	•• –9.83	Tim 26450	Ws41A	912	1311	A	TX	60⅜	10 1/16x3½x⅞	C
13	L		148	220	37000	11300	11.00/20D	11.00/20	Her RXLD	6–4½x5⅛	558	5.4	430	154–2400	7–3½x13¼	Y	Fu 5C650	5	Tim U-200	2F	R	•• –9.83	Tim 26450	Ws41A	912	1311	A	TX	60⅜	10 1/16x3½x⅞	C
14	Federal.....16M		139	194	13500	4460	7.50/20D	7.50/20	Her JXEF	6–3 1/16 x4¼	245	6.5	184	90–3100	7–2 1/16 x10 1/16	N	WG T9	4	Tim 53547DPH	BF	H	•• –5.66	Tim 30000HX	L41HV	310	482	a	TX	60	8⅞x2⅞x¼	T
15	.....16M2		139	194	13500	4590	7.50/20D	8.25/20D	Her JXEF	6–3 1/16 x4¼	245	6.5	184	90–3100	7–2 1/16 x10 1/16	N	WG T9	4	TimE300DPH	dF	H	6.13–8.10	Tim 30000HX	L41HV	310	482	a	TX	60	8⅞x2⅞x¼	T
16	.....18M		139	194	15000	4700	8.25/20D	8.25/20	Her JXBF	6–3⅝x4¼	263	6.5	190	96–3000	7–2½x10 1/16	N	WG T9	8	Tim E100DPH	SF	H	•• –6.20	Tim 30003H	LT41HV	314	532	a	TX	60	8⅞x2⅞x¼	T
17	.....18M2		139	194	15000	4830	8.25/20D	8.25/20	Her JXBF	6–3⅝x4¼	263	6.5	190	96–3000	7–2½x10 1/16	N	WG T9	8	TimE300DPH	dF	H	6.13–8.10	Tim 30003H	LT41HV	314	532	a	TX	60	8⅞x2⅞x¼	T
18	.....25M		139	194	17500	4950	8.25/20D	9.00/20	Her JXCF	6–3¾x4¼	282	6.5	212	102–3000	7–2½x10 ⅞	N	Cla 205VO	5	TimH100DPH	SF	H	•• –6.80	Tim 3100H	LT41HV	346	583	a	TX	60	8⅞x2⅞x¼	T
19	.....25M2		139	194	17500	5100	8.25/20D	9.00/20	Her JXCF	6–3¾x4¼	282	6.5	212	102–3000	7–2½x10 ⅞	N	Cla 205VO	5	TimH300DPH	dF	H	6.13–8.15	Tim 3100H	LT41HV	346	583	a	TX	60	8⅞x2⅞x¼	T
20	.....29M		139	194	20000	5500	9.00/20D	10.00/20	Her JXDF	6–4x4¼	320	6.5	250	112–2800	7–2½x10 1/16	Y	Cla 205V	5	Tim L100DPH	SF	H	•• –6.83	Tim 32514H	LT41HV	466	820	a	TX	60	8⅞x2⅞x¼	T
21	.....29M2		139	194	20000	5690	9.00/20D	10.00/20	Her JXDF	6–4x4¼	320	6.5	250	112–2800	7–2½x10 1/16	Y	Cla 205V	10	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT41HV	466	820	a	TD	76	8⅞x2⅞x¼	T
22	.....29MA		155	194	20000	5950	9.00/20D	10.00/20	Her JXDF	6–4x4¼	320	6.5	250	112–2800	7–2½x10 1/16	Y	Cla 205V▮	15	Tim L100DPH	SF	H	•• –6.83	Tim 32514H	LT41HV	466	820	a	TX	60	8⅞x2⅞x¼	‡T
23	.....29ML		139	194	20000	5535	9.00/20D	10.00/20	Here JXLDF	6–4x4½	339	6.5	272	126–2800	7–2½x10 1/16	Y	Cla 205V	5	Tim L100DPH	SF	H	•• –6.83	Tim 32514H	LT41HV	466	820	a	TX	60	8⅞x2⅞x¼	‡T
24	.....29ML2		139	194	20000	5725	9.00/20D	10.00/20	Here JXLDF	6–4x4½	339	6.5	272	126–2800	7–2½x10 1/16	Y	Cla 205V	10	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT41HV	466	820	a	TD	76	8⅞x2⅞x¼	‡T
25	.....29MLA		155	194	20000	5985	9.00/20D	10.00/20	Here JXLDF	6–4x4½	339	6.5	272	126–2800	7–2½x10 1/16	Y	Cla 205V	15	Tim L100DPH	SF	H	•• –6.83	Tim 32514H	LT41HV	466	820	a	TX	60½	10x3½x⅞	•T
26	.....35M		143	203	21000	6925	9.00/20D	10.00/20	Con T6371	6–4½x4⅝	371	6.6	290	133–2600	7–2¾x13½	Y	Cla 270VO	5	Tim L100DPH	SF	R	•• –6.83	Tim 32514H	LT41HV	466	820	a	TX	60½	10x3½x⅞	•T
27	.....35M2		143	203	21000	7115	9.00/20D	10.00/20	Con T6371	6–4½x4⅝	371	6.6	290	133–2600	7–2¾x13½	Y	Cla 270VO	5	Tim Q100P	SF	R	•• –6.83	Tim 35011TW	TW41A	606	933	a	TD	60½	10x3½x⅞	•T
28	.....45M		143	203	24000	8005	10 00/22D	10.00/24	Con T6427	6–4 1/16 x4 7/16	427	6.4	342	155–2600	7–2¾x13½	Y	Cla 270VO	10	Tim Q300P	dF	R	6.53–8.53	Tim 35011TW	TW41A	606	933	a	TD	60½	10x3½x⅞	•T
29	.....45M2		143	203	24000	8380	10 00/22D	10.00/24	Con T6427	6–4 1/16 x4 7/16	427	6.4	342	155–2600	7–2¾x13½	Y	Cla 270VO	10	Tim S300P	HyF	R	6.53–8.53	Tim 36021TW	Tw41A	722	1051	a	TD	60½	10 1/16x3½x⅞	T
30	.....55M2		143	203	27000	8635	11.00/22D	11.00/24	Con T6427	6–4 1/16 x4 7/16	427	6.4	342	155–2600	7–2 1/16 x13½	Y	Cla 270V▮	15	Tim S-200P	2F	R	•• –7.08	Tim 36021TW	TW41A	722	1051	a	TD	72½	10x3½x⅞	•T
31	.....55MA		155	203	27000	8765	11.00/22D	11.00/24	Con T6427	6–4 1/16 x4 7/16	427	6.4	342	155–2600	7–2 1/16 x13½	Y	Fu 5A65§	15	Tim S200P	2F	R	•• –7.08	Tim 36021TW	Tw41A	722	1051	a	FX	72½	10x3½x⅞	•T
32	.....60MA		155	203	28000	9600	11.00/22D	11.00/24	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2¾x14½	Y	Fu 5A650	10	Tim S300P	HyF	R	6.53–8.53	Tim 36021TW	Tw41A	722	1051	a	TX	60½	10 1/16x3½x⅞	T
33	.....60M2		143	203	28000	9370	11.00/22D	11.00/24	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2¾x14½	Y	Fu 5A650	10	Tim S300P	HyF	R	6.53–8.53	Tim 36000TW	Ws41A	722	1051	a	TX	60½	10 1/16x3½x⅞	T
34	.....65M2		141	201	30000	9995	11.00/22D	11.00/24	Con R6602	6–4 7/16 x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Fu 5A650	15	Tim S200P	HyF	R	•• –7.08	Tim 36000TW	Ws41A	722	1051	a	TX	72½	10 1/16x3½x⅞	•T
35	.....65MA		153	201	30000	10225	11.00/22D	11.00/24	Con R6602	6–4 7/16 x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Fu 5A65§														
	Ford F-1																													
36	Cowl....8HC-84	930	114	114	4700	2224	6.00/16-4	6.50/16-6S	Own 7HC	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 21C	3	Own 8C	H½	H	3.73–4.27	Own 8RC	O41H	178	259	Co	M2	40.06	5.92x2½x15	T
37	Cowl....8RC-84	960	114	114	4700	2264	6.00/16-4	6.50/16-6S	Own 8RC	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 21C	3	Own 8C	H½	H	3.73–4.27	Own 8RC	O41H	178	259	Co	M2	40.06	5.92x2½x15	T
	F-2																													
38	Cowl....8HD-84	1045	122	122	5700	2612	6.50/16-6	7.00/16-6S	Own 7HD	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 51Y	4	Own 8RD	SF	H	•• –4.86	Own 8RD	O41H	167	264	Co	M2	48.06	6x2¼x.19	T
39	Cowl....8RD-84	1075	122	122	5700	2652	6.50/16-6	7.00/16-6S	Own 8RD	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 51Y	4	Own 8RD	SF	H	•• –4.86	Own 8RD	O41H	167	264	Co	M2	48.06	6x2¼x.19	T
	F-3																													
40	Cowl....8HY-84	1120	122	122	6800	2847	7.00/17-6S	7.50/17-8S	Own 7HY	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 51Y	4	Own 8RY	SF	H	•• –4.86	Own 8RY	O41H	188	308	Co	M2	48.06	6x2¼x.19	T
41	Cowl....8RY-84	1150	122	122	6800	2887	7.00/17-6S	7.50/17-8S	Own 8RY	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 51Y	4	Own 8RY	SF	H	•• –4.86	Own 8RY	O41H	188	308	Co	M2	48.06	6x2¼x.19	T
	F-4																													
42	Cowl...8HTL-84	1175	134	134	10000	3182	7.00/20-8S	7.00/18-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTL	SF	H	5.14–5.86	Own 7RTL	O41H	302	506	Co	TX	60.06	7x2¼x.21	T
43	Cowl...8RTL-84	1205	134	134	10000	3222	7.00/20-8S	7.00/18-8	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTL	SF	H	5.14–5.86	Own 7RTL	O41H	302	506	Co	TX	60.06	7x2¼x.21	T
	F-5																													
44	Cowl....8HT-84	1220	134	134	14000	3658	6.50/20-6	7.50/20-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RT	O41H	302	506	Co	TX	60.06	7x2¼x.21	L
45	Cowl....8RT-84	1250	134	134	14000	3698	6.50/20-6	7.50/20-8	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RT	O41H	302	506	Co	TX	60.06	7x2¼x.21	L
46	Cowl...8HST-84	1250	158	158	14000	3748	6.50/20-6	7.50/20-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RT	O41H	302	506	Co	TX	84.06	7x2¼x.21*	LT
47	Cowl...8RST-84	1280	158	158	14000	3788	6.50/20-6	7.50/20-8	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RT	O41H	302	506	Co	TX	84.06	7–2¼x.21*	LT
	F-5 C.O.E.																													
48	Cab...8HOW-81	1605	110	110	14000	▲4108	6.50/20-6	7.50/20-8	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O41H	302	506	Co	TX	60.06	7x2¼x.21*	LT
49	Cab...8ROW-81	1635	110	110	14000	▲4148	6.50/20-6	7.50/20-8	Own 8RW	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O41H	302	506	Co	TX	60.06	7x2¾x.21*	LT
50	Cab....8HW-81	1635	134	134	14000	▲4268	6.50/20-6	7.50/20-8	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O41H	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
51	Cab....8RW-81	1665	134	134	14000	▲4308	6.50/20-6	7.50/20-8	Own 8RW	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O41H	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
52	Cab...8HNW-81	1665	158	158	14000	▲4368	6.50/20-6	7.50/20-8	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O41H	302	506	Co	TX	108.1	7.08x2.8x¼*	LT
53	Cab...8RSW-81	1695	158	158	14000	▲4408	6.50/20-6	7.50/20-8	Own 8RW	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O41H	302	506	Co	TX	108.1	7.08x2.8x¼*	LT
	F-5 School Bus																													
54	Bus Cl..8HST-84	1315	158	158	12000	3855	6.50/20-6	7.00/20-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RT	O41H	302	506	Co	TX	128▮	7x2¼x.21*	LT
55	Bus Cl..8RST-84	1345	158	158	12000	3895	6.50/20-6	7.00/20-8	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RT	O41H	302	506	Co	TX	128▮	7x2¾x.21*	LT
56	Bus Cl..8H4T-84	1530	194	194	15000	4209	7.50/20-8	8.25/20-10	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTH	O41H	302	506	Co	TX	164▮	7.08x2.8x¼*	LT
57	Bus Cl..8R4T-84	1560	194	194	15000	4249	7.50/20-8	8.25/20-10	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTH	O41H	302	506	Co	TX	164▮	7.08x2.8x¼*	LT
	F-6																													
58	Cowl..8HTH-84	1610	134	134	15500	4024	7.50/20-8	8.25/20-10	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RTH	O41HV	302	506	Co	TX	60.06	7.08x2.8x¼*	LT
59	Cowl..8RTH-84	1640	134	134	15500	4064	7.50/20-8	8.25/20-10	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RTH	O41HV	302	506	Co	TX	60.06	7.08x2.8x¼*	LT
60	Cowl.8HSTH-84	1640	158	158	15500	4124	7.50/20-8	8.25/20-10	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.82–8.11	Own 7RTH	O41HV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
61	Cowl.8RSTH-84	1670	158	158	15500	4164	7.50/20-8	8.25/20-10	Own 8RT	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RTH	O41HV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
	F-6 C.O.E.																													
62	Cab.8HOWH-81	1990	110	110	16000	▲4524	7.50/20-8	8.25/20-10	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O41HV	302	506	Co	TX	60.06	7x2¾x.21*	LT
63	Cab.8ROWH-81	2020	110	110	16000	▲4564	7.50/20-8	8.25/20-10	Own 8RW	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O41HV	302	506	Co	TX	60.06	7x2¾x.21*	LT
64	Cab...8HWH-81	2020	134	134	16000	▲4684	7.50/20-8	8.25/20-10	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O41HV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
65	Cab...8RWH-81	2050	134	134	16000	▲4724	7.50/20-8	8.25/20-10	Own 8RW	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O41HV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
66	Cab..8HSWH-81	2050	158	158	16000	▲4784	7.50/20-8	8.25/20-10	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O41HV	302	506	Co	TX	108.1	7.08x2.8x¼*	LT
67	Cab..8RSWH-81	2080	158	158	16000	▲4824	7.50/20-8	8.25/20-10	Own 8RW	8–3 1/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O41HV	302	506	Co	TX	108.1	7.08x2.8x¼*	LT

(Turn to Page 96, please)

†—Front only; Rear 10.00/20.
▲—Front only; Rear 8.25/20.
‡—For shorter wheelbases 8 1/16 x2¼x⅞.

‡—Cowl to Axle.
•—For shorter wheelbases—10x3½x¼.
▮—Auxiliary trans. Spicer 6231B, three forward speeds.
§—Auxiliary trans. Spicer 703F, three forward speeds.
▮—Weights apply to cab chassis models.

■—Two speed rear axle with vacuum shift.
•—Reinforcement 6.58x2.21x.125, Inside Siderail from Front to Rear Spring Brackets.

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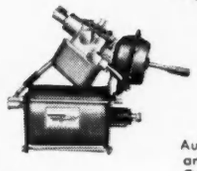
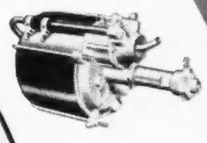
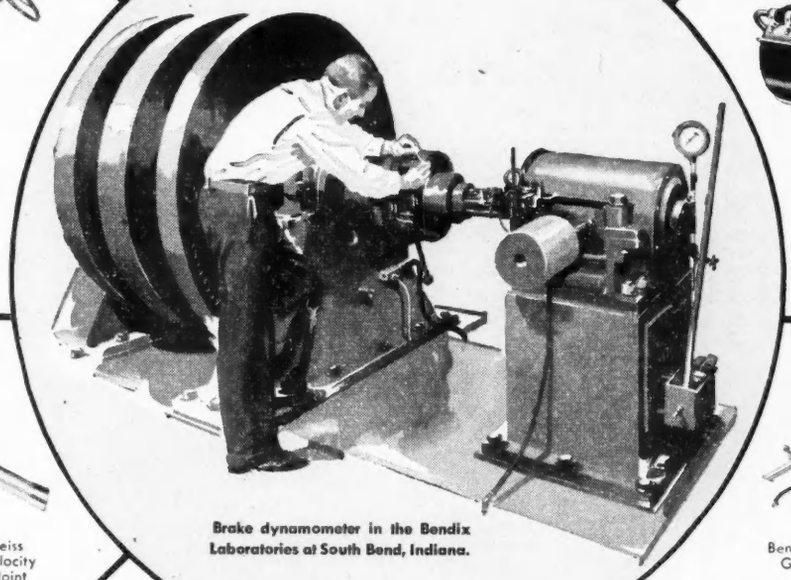


Bendix* Automatic Clutch and Gear Shift Control Systems

Bendix Hydraulic Power Steering Gear



Hydrovac* Power Brake for all types of trucks



Brake dynamometer in the Bendix Laboratories at South Bend, Indiana.

Bendix-Weiss Constant Velocity Universal Joint

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SOUTH BEND 20, INDIANA

‡—For shorter wheelbases 81/2x23/4x1/4.

♦—Auxiliary trans. Spicer 6231B, three forward

—weights apply to cab chassis models.

(Continued from Page 94)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definitions)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANS-MISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	Ford Cont'd F-7																													
1	Cowl....8EQ-84	2685	135	135	19000	5388	8.25/20-10	9.00/20-10	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQ	5	Own 7EQ	Hy	H	6.8	Own 7EQ	O4IHV	350	583	Co	TX	61.06	9x3x.25	T
2	Cowl...8E9Q-84	2735	159	155	19000	5498	8.25/10-10	9.00–20-10	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQ	5	Own 7EQ	Hy	H	6.8	Own 7EQ	O4IHV	350	583	Co	TX	85.06	9x3x.25	T
3	Cowl...8E5Q-84	2785	195	195	19000	5618	8.25/20-10	9.00/20-10	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQ	5	Own 7EQ	Hy	H	6.8	Own 7EQ	O4IHV	350	583	Co	TX	121.1	9x3x.25	T
	F-8																													
4	Cowl...8EQH-84	3335	135	135	21500	5944	9.00/20-10	10.0/20-12	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQH	5	Own 7EQH	SF	H	6.5 –8.87	Own 7EQ	O4IHV	485	729	C	TX	61.06	9x3x.25	T
5	Cowl..8E9QH-84	3385	159	155	21500	6054	9.00/20-10	10.0/20-12	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQH	5	Own 7EQH	SF	H	6.5 –8.87	Own 7EQ	O4IHV	485	729	C	TX	85.06	9x3x.25	T
6	Cowl..8E5QH-84	3435	195	195	21500	6174	9.00/20-10	10.0/20-12	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQH	5	Own 7EQH	SF	H	6.5 –8.87	Own 7EQ	O4IHV	485	729	C	TX	121.1	9x3x.25	T
7	Intern'l (2)...KB-1		113	125	4400	2250	6.00/16-4	7.00/16	Own GRD214	6–3⅞x4½	213	6.3	160	82–3400	4–2⅛x6‡‡	N	Own HDS-B	3	Own R1050	S½	H	3.72–5.11	Own F50	L41H	164	316	e	FX	38	6x2¼x⅛	T
8	.....KB-1M	835	102	113	4600	2150	6.00/16-4	6.50/16-6	Own GRD214	6–3⅞x4½	213	6.3	160	82–3400	4–2⅛x6‡‡	N	O SA-HDS-B	3	Own R1050	S½	H	3.72–5.11	Own F150	L41H	164	316	e	FX	.....	6½x2¼x‡‡	T
9	.....KB-2	770	125	125	5200	2285	6.00/16-4	7.00/16-6	Own GRD214	6–3⅞x4½	213	6.3	160	82–3400	4–2⅛x6‡‡	N	Own HDS-B	3	Own R1050	S½	H	3.72–5.11	Own F50	L41H	164	316	e	FX	50	6x2¼x⅛	T
10	.....KB-3	875	130	....	6650	3000	7.00/16-6	7.50/16-6	Own GRD214	6–3⅞x4½	213	6.3	160	82–3400	4–2⅛x6‡‡	N	Own HDS-B	3	Own R1150	SF	H	4.22–5.28	Own F150	L41H	195	367	e	FX	55	6½x2⅛x‡‡	T
11	.....KB-3M	1025	102	113	7000	2585	7.00/16-6	7.50/16-8	Own GRD214	6–3⅞x4½	213	6.3	160	82–3400	4–2⅛x6‡‡	N	Own H41B	4	Own R1150	SF	H	4.22–5.28	Own F150	L41H	221	367	e	FX	.....	6½x2¼x‡‡	T
12	(a).....KB-5	930	135	177	13500	3705	6.50/20D	8.25/20	O-GRD 233	6–3⅞x4½	233	6.3	181	93–3400	4–2⅛x6‡‡	N	Own H41B	4	Own R1360	SF	H	5.28–7.16	Own F350	LH4IH	294	509	e	FX	60	8x3x⅛	T
13	(a).....KB-6	1170	134	176	14500	4625	7.00/20D	8.25/20	Own BLD250	6–3⅞x4½	251	6.3	200	100–3200	4–2⅛x5‡‡	N	Own WT97A	5	Own R1560	SF	H	5.62–7.16	Own 16F470	LH4IHV	305	539	e	FX	60	8¼x3x⅛	T
14	(a).....KB-7	1625	134	176	16500	5055	7.50/20D	9.00/20	O-BLD 269	6–3⅞x4½	269	6.3	222	100–3000	4–2.7x5‡‡	N	Own F51	5	Own R1560	SF	H	6.50–7.16	Own F470	LH4IHV	368	633	e	FX	60	8¼x3x⅛	T
15	(a).....KB-8	2100	137	197	20000	6580	9.00/20D	10.00/24	O-RED 361	6–4½x5½	361	6.3	282	126–3000	7–3¼x10‡‡	Y	Own F51	5	Own R1572	SF	H	6.43–8.51	Own F553	LH4IHV	407	709	e	FX	60	8¼x3½x⅛	T
16	(a).....KB-10	3150	149	197	22500	7405	10.00/20D	11.00/24	Own RED401	6–4½x5	401	6.3	318	140–2800	7–3¼x10‡‡	Y	Own F52	5	Own R1676	SF	H	6.43–8 05	Own F653	LH4IHV	484	829	e	FX	72	9½x3½x⅛	T
17	(a).....KB-11	3900	149	197	27000	8430	10.00/20D	12.00/24	O-RED 450	6–4½x5	450	6.3	361	148–2600	7–3¼x10‡‡	Y	Own F54	5	Tim R100	28F	H	6.42–8 05	Own F750	WW4IA	746	1030	G	FX	72	10x3½x⅛	T
18	(a).....KB-12	5300	155	215	28500	9175	11.00/20	12.00/20	O-Con. R6586	6–4‡‡x5⅝	586	6.0	475	200–2600	7–3¼x13⅜	Y	Own F55	5	Tim R100	2F	H	** –6.42	Own F750	BW4IA	746	....	G8	FX	66	10x3½x⅛	C
19	(a).....KBR-14	6550	161	215	32000	10100	11.00/20	12.00/24	O-Con. R6586	6–4‡‡x5⅝	586	6.0	475	200–2600	7–3¼x13⅜	Y	Own F55B	5	Tim U200P	2F	H	**–7.08	Own F750	BW4IA	746	....	G8	FX	72	10x3½x⅛	L
20	.....W-3042-L	7150	179	227	30000	12530	10.00/20	11.00/22	Cum HB600	6–5½x5½	672	17	554	254–2600	7–3¼x15¼	Y	Spl 7741	4	Tim R-100	2F	H	** –6.42	Own 86303	BW4IA	690	....	G	FX	84	10x3½x⅛	L
21	.....W-4042-OH	9900	170	230	40000	13115	10.00/20	14.00/24	Cum HB600	6–4½x6	672	17	492	150–1800	7–4½x..	Y	Spl 7741	4	Tim 79750PA	2F	H	7.69–11.36	Own 82F	BW4IA	656	....	G	FX	72	10x3½x⅛	C
22	Kenworth(D)..521	11,250	161	215	35000	12200	10 00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	BL 8241	4	Tim U200P	DR	H	6.42–7.84	Tim 36000TW	Ws4IA	752	1050	a	TD	72	9½x3¼x⅛	C
23	585	.....	150	215	30000	10130	10.00/20	11.00/22	Bu LO525	6–4½x5½	525	5.5	385	150–2200	7–3x11½	Y	Fu 5A620	5	Tim U200P	....		6.14	Tim 36000TW	Ws4IA	752	....	a	....	70	9½x3¼x⅛	....
24	Linn.....L-2	.....	120	....	9000	6000	7.50/20S	8.25/20S	Her QXC3	6–3⅜x4½	221	....	159	77–3200	7–1¾x10⅛	N	WGT9	4	Own 600	N	N	None	Tim F30B28H	L41H	306	478	a	T	.....	None	....
25	.....L-4	.....	156	....	9200	6200	7.50/20S	8.25/20	Her QXC3	6–3⅜x4½	221	....	159	77–3200	7–1¾x10⅛	N	WGT9	4	Own 600	N	N	None	Tim F30B28H	L41H	306	478	a	X	.....	None	....
26	.....L-6	.....	169	....	12700	7700	7.50/20D	8.25/20	Her JXE3	6–3½x4¼	245	6.5	184	91–3200	7–2½x10‡‡	N	WGT9	4	Own 600T	N	N	None	Tim F30B28H	L61H	486	744	a	X	.....	None	....
27	.....L-8	.....	205	....	12900	7900	7.50/20D	8.25/20	Her JXE3	6–3½x4¼	245	6.5	184	91–3200	7–2½x10‡‡	N	WGT9	4	Own 600T	N	N	None	Tim F30B28H	L61H	486	744	a	X	.....	None	....
28	Mar. Her...DVL-4	.....	90	118	‡6750	.....	7.50/16S	8.25/18S	Willys MB	4–3⅛x4⅛	134	6.4	105	60–4000	3–2.33x5.48	Y	Own	3	(Front Drive)	.....	.....	7.10	Own	41H	202	327	M2	.....	.....	None	....
29	Reo.....D–19XA	.....	125	125	8000	4340*	7.00/20S	8.25/20S	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	Tim 53547	SF	H	5.66–6.67	Tim 30000	T41H▼	310	482	var	TX	60	9x3x¼	T
30	.....D–19A	.....	125	125	14000	4740*	7.50/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.67*	Tim 30000	T41VH▼	310	482	var	TX	60	9x3x¼	T
31	.....D–19T	.....	125	125	14000	5330*	8.25/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	Tim E300	HFd	H	6.13&8.10	Tim 30000	T41VH▼	310	482	var	TX	60	9x3x¼	T
32	.....D–19B	.....	150	150	14000	4900*	7.50/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.67*	Tim 30000	T41VH▼	310	482	var	TX	80	9x3x¼	T
33	.....D–19C	.....	165	165	14000	5090*	7.50/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.67*	Tim 30000	T41VH▼	310	482	var	TX	100	9x3x¼	T
34	.....D–19L	.....	187	187	14000	5080*	8.25/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.67*	Tim 30000	T41VH▼	310	482	var	TX	123	9x3x¼	T
35	.....D–21A	.....	125	125	15500	4920*	7.50/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	WG T97	4	Tim E100	HF	H	5.66–6.2	Tim 31013	T41VH▼	310	482	var	TX	60	9x3x¼	T
36	.....D–21T	.....	125	125	15500	5380*	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	WG T97	4	Tim E300	HFd	H	6.13&8.10	Tim 31013	T41VH▼	310	482	var	TX	60	9x3x¼	T
37	.....D–21B	.....	150	150	15500	5230*	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	WG T97	4	Tim E100	HF	H	5.66–6.2	Tim 31013	T41VH▼	310	482	var	TX	85	9x3x¼	T
38	.....D–21C	.....	165	165	15500	5270*	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	WG T97	4	Tim E100	HF	H	5.66–6.2	Tim 31013	T41VH▼	310	482	var	TX	100	9x3x¼	Tf
39	.....D–21R–A	.....	130	130	18000	6040*	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H200–300	HFd	H	7.3*	Tim 31104	T41VH▼	344	584	var	TX	65	9x3x¼	T
40	.....D–21R–T	.....	130	130	18000	6380*	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H300	HFd	H	6.13&8.15	Tim 31104	T41VH▼	344	584	var	TX	65	9x3x¼	T
41	.....D–21R–B	.....	150	150	18000	6080*	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	5.28–6.8*	Tim 31104	T41VH▼	344	584	var	TX	85	9x3x¼	T
42	.....D–21R–C	.....	165	165	18000	6180*	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	5.28–6.8*	Tim 31104	T41VH▼	344	584	var	TX	100	9x3x¼	Tf
43	.....D–21R–L	.....	185	185	18000	6430*	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	5.28–6.8*	Tim 31104	T41VH▼	344	584	var	TX	120	9½x3⅛x⅛	Tf
44	.....D–22A	.....	130	130	20500	6220*	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H300	HFd	H	6.13&8.15	Tim 31104	T41VH▼	344	584	var	TX	65	9½x3⅛x⅛	T
45	.....D–22T	.....	130	130	20500	6630*	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H300	HFd	H	6.13&8.15	Tim 31104	T41VH▼	344	584	var	TX	65	9½x3⅛x⅛	T
46	.....D–22B	.....	150	150	20500	6140*	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H Series	HFd	H	6.16–7.3*	Tim 31104	T41VH▼	344	584	var	TX	85	9½x3⅛x⅛	T
47	.....D–22C	.....	165	165	20500	6380*	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H Series	HFd	H	6.16–6.8*	Tim 31104	T41VH▼	344	584	var	TX	100	9½x3⅛x⅛	Tf
48	.....D–22L	.....	185	185	20500	6430*	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	6.16*	Tim 31104	T41VH▼	344	584	var	TX	120	9½x3⅛x⅛	T
49	.....D–22R–B	.....	150	150	20500	6480*	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim L100–200	HF2	H	6.83–8.22	Tim 32500	T41VH▼	370	640	var	TX	85	9½x3⅛x⅛	T
50	.....D–23T	.....	130	130	23000	8000*	9.00/20	11.00/20	Con T–6427	6–4⅛x4⅞	427	6.2	336	153–2800	7–2⅝x13.6	Y	Cla 270V–VO	5	Tim L100–300	HFd	H	5.28–6.16*	Tim 32500	Ws4IA	514	644	var	TX	65	9½x3⅛x⅛	T
51	.....D–23L	.....	185	185	23000	7900*	10.00/20	11.00/20	Con T–6427	6–4⅛x4⅞	427	6.2	336	153–2800	7–2⅝x13.6	Y	Cla 270V–VO	5	Tim L100	HF	H	6.16	Tim 32500	Ws4IA	514	644	var	TX	120	9½x3⅛x⅛	Tf
52	.....D–23R–T	.....	130	130	25000	8580*	10.00/20	11.00/20	Con T–6427	6–4⅛x4⅞	427	6.2	336	153–2800	7–2⅝x13.6	Y	Cla 270V–VO	5	Tim Q100–300	HFd	H	5.28–6.16*	Tim 35011	Ws4IA	638	934	var	TX	65	9½x3⅛x⅛	T
53	.....D–23R–B	.....	150	150	25000	8570*	10.00/20	11.00/20	Con T–6427	6–4⅛x4⅞	427	6.2	336	153–2800	7–2⅝x13.6	Y	Cla 270V–VO	5	Tim S200	HF2	H	7.84*	Tim 35011	Ws4IA	712	1038	var	TX	85	9½x3⅛x⅛	T
54	.....D–23R–BL	.....	150	150	25000	9060*	10.00/20	11.00/20	Con T–6427	6–4⅛x4⅞	427	6.2	336	153–2800	7–2⅝x13.6	Y	Cla 270VO&v	15	Tim S200	HF2	H	7.84*	Tim 35011	Ws4IA	712	1038	var	TD	85	9½x3⅛x⅛	T
55	.....D–23R–L	.....	185	185	25000	8300*	10.00/20	11.00/20	Con T–6427	6–4⅛x4⅞	427	6.2	336	153–2800	7–2⅝x13.6	Y	Cla 270V–VO	5	Tim Q100–300	HFd	H	6.16*	Tim 35011	Ws4IA	638	934	var	TX	120	9½x3⅛x⅛	Tf
56	.....30–A	.....	△145	145	32000	11000*	11.00/20	11.00/24	Con R–6513	6–4½x5⅝	513	5.9	400	173–2800	7–3¼x14.7	Y	Spi6252A–53‡	5	TS300–U200	HFd	H	7.84*	Tim 36000	Ws4IA	722	1038	var	TI	67	10½x3½x⅜	T
57	.....30–B	.....	△165	165	32000	11750*	11.00/20	11.00/24	Con R–6513	6–4½x5⅝	513	5.9	400	173–2800	7–3¼x14.7	T	Spi6252A–53‡	5	TS300–U200	HFd	H	7.84*	Tim 36000	Ws4IA	722	1038	var	TI	87	10½x3½x⅜	T
58	.....31–A	.....	△145	145	32000	11000*	11.00/20	11.00/24	Con R–6602	6–4⅝x5⅞	602	5.9	464	202–2800	7–3¼x14.7	Y	Spi6252A–53‡	5	TS300–U200	HFd	H	7.84*	Tim 36000	Ws4IA	722	1038	var	TI	67	10½x3½x⅜	T
59	.....31–B	.....	△165	165	32000	11750*	11.00/20	11.00/24	Con R–6602	6–4⅝x5⅞	602	5.9	464	202–2800	7–3¼x14.7	Y	Spi6252A–53‡	5	TS300–U200	HFd	H	7.84*	Tim 36000	Ws4IA	722	1038	var	TI	87	10½x3½x⅜	T
	School Buses	.....																												
60	.....C119–31	.....	152	152	.....	.....	7.00/20	7.00/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	Cla 185F	4	Tim 53547	SF	H	6.16	Tim 30000	T41VH▼	310	482	var	TX	.....	9x3x¼	T
61	.....C11L–43	.....	188	188	.....	.....	7.50/20	7.50/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	Cla 185F	4	Tim 53547	SF	H	6.67	Tim 31013	T41VH▼	310	482	var	TX	.....	9x3x¼	T
62	.....C119LS–49	.....	206	206	.....	.....	7.50/20	7.50/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	Tim 53547	SF	H	6.67	Tim 31013	T41VH▼	310	482	var	TX	.....	9½x3⅛x⅛	T
63	.....C121–49	.....	206	206	.....	.....	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 231F	4	Tim E100	HyF	H	6.80	Tim 31104	T41VH▼	314	532	var	TX	.....	9½x3⅛x⅛	T
64	.....C121S–55	.....	224	224	.....	.....	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	WG T97	4	Tim E100	HyF	H	6.80	Tim 31104	T41VH▼	314	532	var	TX	.....	9½x3⅛x⅛	T
65	.....C122–55	.....	224	224	.....	.....	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 231F	4	Tim H100	HyF	H	7.20	Tim 31104	T41VH▼	344	584	var	TX	.....	9½x3⅛x⅛	T
66	.....C–122–L	.....	252	252	.....	.....	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 231F	4	Tim H100	HyF	H	7.2	Tim 32500	T41VH	344	588	var	TX	.....	9½x3⅛x⅛	T
67	Sterling....HD97	.....	148	175	24000	9150	9.00/20	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	Tim Q100DPH	FHy	R	5 29–7.80	Tim 35011H	T41IHV	324	926	A	TX	67	9x7x¼	A
68	.....HD105	.....	148	175	24000	9550	10.00/20	11.00/22	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	Tim R100DPH	FHy	R	5 29–7.40	Tim 35011H	T41IHV	524	926	A	TX	67	9x3¼x¼	A
69	.....HD115	.....	148	175	32000	10650	10.00/20	11.00/24	Wau 6SRKR	6–4⅝x5⅛	517	5.5	368	125–2250	7–3x13⅜	Y	Fu 5A62	5	Tim S200P	2F	R	6 42–9.83	Tim 36000TW	Ws4IA	722	1054	A	TX	67	9x3¼x¼	A
70	.....HD145	.....	148	175	36000	11250	11.00/20	12.00/24	Wau 6SRKR	6–4⅝x5⅛	517	5.5	368	125–2250	7–3x13⅜	Y	Fu 5A62	5	Tim 79721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	670	1118	A	TX	67	9¼x3⅝x⅜	A

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▲ Includes Cab.
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▼ Lockheed Type Front and Timken Dual Primary Rear Brakes.
‡ 6231A Spicer Auxiliary Transmission. 8031 F-G Spicer Transmission available.
△ Special W.B.'s available on request.
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‡ 8200 for 8.25 18 tires.

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Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES SERVICE Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Sterling, Cont'd.																														
1	(D) HD115H		158	185	32000	11950	10.00/20	11.00/24	Cum HB600	6-4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86	4	Tim S200P	2F	R 6.42–9.83	Tim 36000TW	Ws4IA	722	1054	A	TX	68	9x3¼x¼	A
2	(D) HD145H		158	185	36000	12550	11.00/20	12.00/24	Cum HB600	6-4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86	4	Tim 79721W	2F	R 7.69–11.36	Tim 36000TW	Ws4IA	670	1118	A	TX	68	9¼x3⅝x⅝	A
3	HC97		148	175	24000	9200	9.00/20	11.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	Own 97H	CD	R 6.70–10.82	Tim 35011H	T41IHV	518	852	A	TX	67	9x7x¼	A
4	HC105		148	175	28000	9700	10.00/20	11.00/22	Wau 6MZA	6-4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43§	15	Own 137H	CD	R 6.70–10.82	Tim 35011H	T41IHV	540	842	A	TX	67	9x3¼x¼	A
5	HC115		148	175	32000	10350	10.00/20	11.00/24	Wau 8RKR	6-4⅝x5½	517	5.5	368	125–2250	7–3x13½	Y	Fu 5A62§	15	Own 137W	CD	R 6.70–10.82	Tim 36000TW	Ws4IA	648	1064	A	TX	67	9x3¼x¼	A
6	HC144		148	175	36000	11250	10.00/22	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	368	125–2250	7–3x13½	Y	Fu 5A62§	15	Own 148W	CD	R 6.70–10.82	Tim 36000TW	Ws4IA	708	1102	A	TX	67	9¼x3¾x⅛	A
7	HC147		148	175	36000	11500	10.00/22	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	368	125–2250	7–3x13½	Y	Fu 5A62§	15	Own 147W	CD	R 6.70–10.82	Tim 36000TW	Ws4IA	708	1102	A	TX	67	9¼x3⅜x⅛	A
8	HC175		167	185	45000	14600	12.00/24†	14.00/24‡	Wau 145GK	6-5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86•	12	Own 175W	CD	R 7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	TX	77	9¼x3⅝x⅛	A
9	HC250		178	190	50000	18400	14.00/24†	14.00/24‡	Wau 145GK	6-5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86•	12	Own 251W	CD	R 7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	JX	95	12x3½x⅜	AL
10	(D) HC115H		167	185	32000	12250	10.00/20	11.00/24	Cum HB600	6-4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86•	12	Own 137W	CD	R 6.70–10.82	Tim 36000TW	Ws4IA	648	1064	A	TX	77	9x3¼x¼	A
11	(D) HC175H		167	185	45000	14930	12.00/24†	14.00/24‡	Cum HBD600	6-4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86•	12	Own 175W	CD	R 7.31–12.24	Tim 27454W	Ws4IA	786	1212	A	TX	77	9¼x3⅝x⅜	A
12	(D) HC250H		178	190	60000	18700	14.00/24‡	14.00/24‡	Cum HBD600	6-4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86•	12	Own 251W	CD	R 7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	JX	95	12x3½x⅜	AL
13	Studebaker 2R5	972	112	112	4600	2125	6.00/16S	6.50/16S	Own 1R	6-3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 673519	3	Own 673874	Hy	H **–4.82	Own 677574	Wg4IH	170	276	CO	2I	40	7x2 1/4x x¼	T
14	2R10	1038	122	122	6100	2400	6.50/16S	7.50/16S	Own 1R	6-3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 673519	3	Own 677806	SF	H 5.57–4.86	Own 677574	Wg4IH	198	314	CO	2I	50	7⅛x2⅛x⅛	T
15	2R15–21	1186	121	121	7800	3005	7.00/17S	7.00/20	Own 2R	6-3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 676044	4	Own 677768	SF	H 5.83–6.66	Own 677091	LH4IH	216	342	Ce	TX	50⅛	8x2⅜x⅛	T
16	2R15–31	1205	131	131	10000	3065	7.00/17S	7.00/20	Own 2R	6-3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 676044	4	Own 677768	SF	H 5.83–6.66	Own 677091	LH4IH	216	342	Ce	TX	60⅛	8⅛x2¼x⅛	T
17	2R16	1291	131	195	14000	3695	6.50/20D	8.25/20	Own 3R	6-3⅛x4⅜	226	6.5	174	94–3400	4–2½x5‖	N	Own 676045	4	Own 675732♦	Hy	H 6.66–5.66	Own 674484	LH4IH	280	442	Ce	TX	60⅛	8½x2‖x½	T
18	2R17	1592	131	195	16000	4180	7.50/20D	8.25/20	Own 3R	6-3⅛x4⅜	226	6.5	174	94–3400	4–2¼x5‖	Y	Own 676045	4	Own 675571♦	Hy	H 6.80–	Own 674484	LH4IH	350	553	Ce	TX	60⅛	8½x2‖x½	P
19	Truckstell(C) F18-5		140	194	18500	▲5365	7.50/20•	9.00/20	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford & BL	12	Cla R1250	SF	H 5.67–6.83	Ford	L4IHV	390	600	a	TX	65¾	7½x3x.47	CTf
20	(C) F19-5-0		108	166	19500	▲5615	7.50/20•	9.00/20	Ford	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.71	N	Ford & BL	12	Cla R1250	SF	H 5.67–6.83	Ford	L4IHV	390	600	a	TX	65¾	7½x3x.47	CTf
21	(C) C18-5		147	195	18500	▲5530	7.50/20•	9.00/20	Chevrolet	6–3⅛x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	N	Chev & BL	12	Cla R1250	SF	H 5.67–6.83	Chevrolet	L4IHV	399	600	a	TX	70	9½x3x.50	CTf
22	(C) C19-5-0		120	180	19500	▲5700	7.50/20•	9.00/20	Chevrolet	6–3⅛x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	N	Chev & BL	12	Cla R1250	SF	H 5.67–6.83	Chevrolet	L4IHV	399	600	a	TX	70	9½x3x.50	CTf
23	Ward La Fr. D-1		149	220	25000	▲ 9500	10.00/20	11.00/20	Con T6427	6–4⅛x4⅛	427	5.1	340	132–2600	7–2½x13½	Y	Ful 5A430	5	Tim Q-100	B	R **–6.83	Tim 35017TW	Ws4A	600	928	C	TM	68¼	9⅛x3x¼	....
24	D-1C		149	220	29000	▲ 9500	11.00/20	11.00/22	Con T6427	6–4⅛x4⅛	427	5.1	340	132–2600	7–2½x13½	Y	Ful 5A430	5	Tim S-200	S2	R **–7.08	Tim 35017TW	Ws4A	673	1031	C	TM	68¼	9⅛x3x¼	....
25	D-2K		149	220	29000	▲10000	11.00/20	11.00/22	Wau 140GK	6–4½x5½	525	6.4	425	168–2400	7–2¾x13‖	Y	Ful 5A620	5	Tim S-200	S2	R **–7.84	Tim 35017TW	Ws4A	673	1031	C	TM	68¼	10x3½x⅛	....
26	D-2Z		149	220	29000	▲10000	11.00/20	11.00/20	Wau 140GZ	6–4⅝x5½	554	6.4	456	184–2400	7–3¼x13⅞	Y	Ful 5C650	5	Tim S-200	S2	R **–7.84	Tim 35017TW	Ws4A	673	1031	C	TM	68¼	10x3½x⅛	....
27	D-3		149	220	29000	▲10000	11.00/20	11.00/22	Con R6572	6–4⅜x5⅝	572	5.9	440	189–2600	7–3¼x14½	Y	Ful 5C650	5	Tim S-200	S2	R **–7.84	Tim 35017TW	Ws4B	673	1031	C	TM	68¼	10x3½x⅛	....
28	D-3S		149	220	29000	▲10000	11.00/20	11.00/22	Con R6602	6–4⅞x5⅝	602	5.9	463	198–2600	7–3¼x14½	Y	Ful 5C650	5	Tim S-200	S2	R **–7.84	Tim 35017TW	Ws4B	673	1031	C	TM	68¼	10x3½x⅛	....
29	D-5		149	220	35000	▲12500	11.00/22	11.00/24	Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16¾	Y	Ful 5C650	5	Tim U-200	S2	R **–6.42	Tim 27463	Ws4B	681	1041	C	TM	68¼	10x3½x⅛	....
30	Willys (Sd.Del.) 463	1425*	104	104	4000	•2752	6.50/15S	.....	Own 463	4–3⅛x4⅜	134	6.5	105	63–4000	3–2.33xo.48	N	WG T96	3	Spl 23–1	Hy§	H 4.88–5.38	Own I Tr	B4IH	133	220	a	2I	....	5x2¼x.063	TfD
31	Willys 2WD	1450*	118	118	5300	•2788	6.50/16S	7.00/16S	Own 2WD	4–3⅛x4⅜	134	6.5	105	60–4000	3–2.33x5.48	N	WG T90E	3	Tim51540NX3	S§	H 5.38–6.17	Cla F-154	B4IH	176	276	a	2I	42.28	5½x2x⅛	TD
	Four-Wheel-Drive																														
32	Corbitt 22FG		159	Opt	22000	.....	9.00/20	10.00/20	Con B6371	6–4½x4½	371	6.0	280	100–2600	7–2⅛x13½	Y	Fu 5A43	5	Tim R2090H	2F	H ** –8.43	Tim F2090H	L4IHV	....	868	a	TD	74	9x3x¼	DL
33	Dodge B-1-P W		126	126	8700	.....	7.50/16-S	9.00/16-S	Own T-137	6–3¼x4½	230	6.7	185	94–3200	4–2½x4.8	Y	NP-38580	4	Own T-137	HyF	H 4.8–5.8	Own T-137	O4IH	210	311	c	TX	52‖	⅛x2⅛x6½	C
34	FWD HA		132	168	17000	▲7470	8.25/20D	10.00/20	Wau BZ	6-4x4¼	320	5.9	237	104–3000	7–2⅝x10¼	Y	Own H	5	Own H	SF	H 6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼	T
35	HR		132	168	20000	▲8000	9.00/20	10.00/20	Wau MZA	6–4¼x4⅝	404	5.6	291	129–2800	7–2⅝x12⅝	Y	Own H	5	Own H	SF	H 6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼	T
36	HG		154	154	20000	▲8050	9.00/20	10.00/20	Wau MZA	6–4¼x4⅜	404	5.6	291	129–2800	7–2⅝x12⅝	Y	Own H	5	Own H	SF	H 6.6 –9.06	Own H	L4IHV	391	807	a	T4	89¾	7⅛x3x‖	C
37	SU		150	182	28000	▲10570	11.00/20D	11.00/20	Wau SRKR	6–4⅝x5½	517	5.5	365	126–2400	7–3x13⅞	Y	Own U	5	Own U	BF	H 6.7 –9.8	Own U	L4IHV	512	867	a	T4	90	8⅛x3x‖	C
38	ZU		150	182	33000	12540	11.00/20D	11.00/20	Wau 140GZ	6–4½x5½	554	6.4	460	188–2600	7–3¼x13‖	Y	Own S	5	Own ZU	SF	H 6.79–12.59	Own ZU	L4IHV	640	1106	a	T4	90	10⅛x3x‖	C
39	M7		150	180	38600	▲16500	12.00/20D	12.00/24	Wau 145GK	6–5¼x6	779	6.2	585	186–2000	7–3½x17¾	Y	Own M	10	Tim 1758	2F	H ** –7.33	Wis F409	Ws4IA	578	976	a	T4	90	10⅛x3x‖	C
40	(D) M7D		150	180	38600	▲15700	12.00/20D	12.00/24	Bu DC844	6–5¼x6½	844	....	605	180–1800	7–3¼x17	Y	Own M	10	Tim 1758	2F	H ** –7.7	Wis F409	Ws4IA	578	976	a	T4	90	10⅛x3x‖	C
41	M10		150	180	44000	15800	11.00/24D	12.00/24	Wau 145GK	6–5⅛x6	779	6.2	585	186–2000	7–3½x17¾	Y	Own M	10	Tim 79721	2F	H ** –7.7	Wis F409	Ws4IA	614	1030	a	T4	90	10⅛x3x‖	C
42	(D) M10D		150	180	44000	▲16400	11.00/24D	12.00/24	Bu DC844	6–5¼x6½	844	....	605	180–1800	7–3¼x17	Y	Own M	10	Tim 79721	2F	H ** –7.7	Wis F409	Ws4IA	614	1030	a	T4	90	10⅛x3x‖	C
43	Marmon-Herrington MH440-4		158	170	24000	▲9300	9.00/20D	10.00/20	Her WXLC3	6–4¼x4¾	404	5.4	293	118–2800	7–2¾x13¼	Y	Fu 5A430	5	Own 1121	2B	H ** –8.43	Own 121	W....A	584	887	c	F	72	9‖x3x¼	T
44	Herr. MH555-4		161	173	28000	▲10200	10.00/20D	11.00/20	Her RXC	6–4⅝x5¼	529	6.3	390	131–2200	7–3x13¼	Y	Fu 5A620	5	Own 1122	2B	H ** –8.15	Own 122	W....A	692	1039	c	F	72	10⅛x3x⅛	T
45	(C) R5-4		134	134	15500	▲4847	7.50/20D	7.50/20	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H ** –6.67	Own M5	F.....H	303	563	a	F	60⅛	7x2¾x⅜	T
46	(C) R6-4		158	158	15500	▲4973	7.50/20D	7.50/20	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H ** –6.67	Own M5	F.....H	303	563	a	F	84⅛	7x2¾x⅜	T
47	(C) LD6P-4		114	....			15"	15"	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	T ** –4.11	Own O	F.....H	162	....	A	F	....	....	X
48	(C) LD7-4		114	....	4700	▲2719	15"	15"	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H ** –4.11	Own O	F.....H	162	....	A	F	40⅛	5‖x2¼x⅛	T
49	(C) R3-4		122	....	6800	▲4500	7.50/17	7.50/17	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H ** –4.86	Own I	F.....H	186	....	A	F	48	6x2¼x⅛	T
50	(C) R4-4		134	....	7500	.....	7.00/18S	7.00/18	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H ** –5.33	Own	F.....H	303	563	A	F	60⅛	7x2⅜x⅛	T
51	(C) R5-6-COE4		110	158	15500	.....	7.50/20D	7.50/20	Ford	8–3⅛x3⅜	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H ** –6.67	Own	F.....H	303	563	A	F	60⅛	7.08x2.8x⅛	T
52	Oshkosh W-312		149	205	25000	▲10200	10.00/20D	11.00/20	Her WXLCO3	6–4⅛x4⅛	404	6.3	312	139–2600	7–2⅝x13¾	Y	Fu 5A43	10	Own W312	SF	H ** –6.8	Own W312	L4II	510	876	G	TX	82	8¼x⅜x⅝	TF
53	W1700		150	205	28000	▲11000	11.00/20D	12.00/20S	Her RXC	6–4⅝x5¼	529	5.4	395	131–2200	7–3x13¼	Y	Fu 5A620	5	Own W1700	SF	H ** –6.4	Own 1700	L4IH	570	980	G	TX	82	8⅛x3⅜x⅜	TF
54	W-700		150	205	30000	▲12000	11.00/20D	12.00/20	Her RXCO	6–4⅝x5¼	529	5.4	395	131–2200	7–3x12¾	Y	Fu 5A650	10	Own W700	2F	H ** –6.8	Own W700	L4IH	630	975	G	TX	82	10¼x3x⅜	TF
55	(D) W-703D		150	205	30000	▲12700	11.00/20D	12.00/20	Her DRXC	6–4⅝x5¼	529	15.	398	147–2200	7–3 1/2x13¼	Y	Fu 5A650	10	Own W700	2F	H ** –6.8	Own W700	L4IHA	630	975	G	TX	82	10¼x3x⅜	TF
56	W-703		150	205	30000	▲12200	11.00/20D	12.00/20	Her RXLD	6–4¾x5¼	558	5.4	430	150–2200	7–3½x13¼	Y	Fu 5A650	10	Own W700	2F	H ** –6.8	Own W700	L4IH	630	975	G	TX	82	10⅛x3x⅜	TF
57	W-705		150	205	30000	▲12200	11.00/20D	12.00/20	Her RXLD	6–4¾x5¼	558	5.4	430	150–2200	7–3½x13¼	Y	Fu 5A650	10	Own W700	2F	H ** –6.8	Own W700	L4IH	630	975	G	TX	82	10⅛x3x⅜	TF
58	(D) W-906		158	181	38000	▲15600	12.00/20D	14.00/20S	Cum HB600	6–4⅞x6	672	....	500	150–1800	7–4½x16	Y	Fu 4A86	12	Own W906	2F	H ** –6.2	Own W906	LT4IWS	645	975	G	TX	90	10½x3½x⅝	TF
59	W2200		160	181	40000	▲16500	13.00/20D	14.00/20S	Bu MO779	6–5¼x6	779	....	575	188–2100	7–3¾x17	Y	Fu 4A86	12	Own W2200	2F	H ** –6.15	Own 2200	LT4IA	645	975	G	TX	90	10½x3½x⅝	TF
60	W2201		160	181	40000	▲16500	13.00/20D	14.00/20S	Bu MO893	6–5⅝x6	893	....	670	200–1800	7–3¾x17	Y	Fu 4A86	12	Own W2200	2F	H ** –6.15	Own 2200	LT4IA	645	975	G	TX	90	10½x3½x⅝	TF
61	(D) W2204		160	181	46000	▲18500	13.00/20D	14.00/24	Bu 6DC844	6–5¼x6½	844	....	605	180–1800	7–3½x17	Y	Fu 4A86	12	Own W2204	2F	H ** –6.4	Own 2204	LT4IA	780	1190	G	TX	90	10¼x3½x⅝	TF
62	W2205		160	181	54000	▲19500	13.00/20D	14.00/24	Bu 6DCS844	6–5¾x6½	844	....	740	240–2100	7–3¾x17	Y	Fu5A920	10	Own W2205	2F	H ** –6.3	Own W2205	LT4IA	780	1190	G	TX	90	10½x3½x⅝	TF
63	Peterbilt(D)270DD		165	Opt	27000	12500	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Spl 7741	12	U-200P	2F	R ** –6.42	Tim 36000W▼	Ws4IA	800	1250	a	FD	80½	10⅝x3‖x⅛	TL
64	Sterling DD115		160	178	32000	11500	10.00/20	11.00/24	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¼	Y	Fu 5A62▲	10	Tim 1357W	2F	H 6.52–8.6	Tim F3110W	Ws4IA	644	984	A	TX	76	9x3¼x¼	A
65	(D) DD145H		167	185	36000	13900	11.00/20	12.00/24	Cum HB600	6 4½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86▼	10	Tim 1758W	2F	H 7.33–10.3	Tim F409CW	Ws4IA	644	984	A	TX	77	9¼x3⅝x⅜	A
66	Walter(c.f.) FN		126	150	20000	7500	9.00/20D	10.00/20S	Wau MZA	6–4¼x4⅝	404	5.6	290	125–2600	7–2⅝x12½	Y	Own FN	6	Own FNB	2	H 6.0–8.0	Own FN	O4IA	470	670	G	FT	84	7x2⅝x¼	C
67	(c.f.) FZM		126	150	24000	8500	10.00/20D	12.00/20S	Wau MZA	6–4¼x4⅝	404	5.6	290	125–2600	7–2⅝x12½	Y	Own FN	6	Own FMB	2	H 6.0–8.0	Own FJ	O4IA	470	670	G	FT	84	12x3½x½	B

(Turn to page 100, please)

▲ Includes Cab.
‡ Rear only; Front 12.00/24.
† Rear only: Front 11.00/24.
♦ 2 speed 6.13–8.10 optional
• Auxiliary transmission Own FJ.
• Complete Vehicle with pick-up type body.
△ Timken T76—2 speed transfer case.
§ Auxiliary Transmission Own OJ.
° Front only; Rear 8.25/20
▼ Timken T77 2-speed Transfer Case.

LS Bodies built for Adler Mayonnaise Company by Hercules Body Company, Evansville, Indiana.

"For Repairs on This Body— Less than $50 in Eight Years"

That's Low-Cost Transportation

● The Lindsay Truck Body, shown in the arrow in the illustration above, has been in operation day after day for eight years, and the owner reports it is still in excellent condition.

Still New Looking—Still Modern in Style!

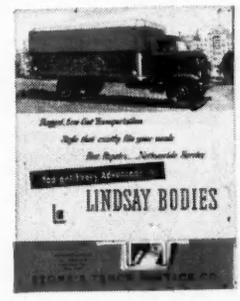
Repairs Cost Less than $50 in Eight Years.

"That's the total repair bill," says Mr. Adler.

That's service—that's low-cost transportation—that's why the Adler Mayonnaise Company has ordered and reordered until it now has a growing fleet.

How will your truck bodies look eight years from now?—what will be your total maintenance cost? You will be ahead with a Lindsay Body—investment in low-cost transportation that pays dividends for years.

Write for the new full-color Lindsay Folder.



LINDSAY STRUCTURE

The Lindsay Corporation, 1724-25th Avenue, Melrose Park, Illinois. Sales Offices: Chicago, New York, San Francisco.

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents and Patents Pending

(Continued from Page 98)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE: Minimum Standard	WHEELBASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Sp'ds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES: SERVICE: Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Walter, Cont'd.																														
1	(c.f.)..FCK	....	126	138	30000	10500	10.00/24D	11.00/24S	Wau SRKR	6-4⅝x5⅛	517	5.5	365	125-2200	7-3x13⅞	Y	Own FC	6	Own FCB	2	H	7.5-9.0	Own FC	O4IA	585	890	D	FI	84	13x3¾x½	B
2	(c.f.)....FC	....	138	162	32000	11000	11.00/24D	12.00/24S	Wau SRKR	6-4⅝x5⅛	517	5.5	365	125-2200	7-3x13⅞	Y	Own FC	6	Own FCB	2	H	7.5-9.0	Own FCR	O4IA	585	890	D	FI	96	14x3¾x½	B
3	(c.f.)..FGB	....	126	162	32000	12000	11.00/24D	12.00/24S	Wau 145GK	6-5¼x6	779	5.7	580	185-2000	7-3½x17¾	Y	Own FA	6	Own FCB	2	H	7.5-9.0	Own FCR	O4IA	585	890	D	FI	84	14x3¾x½	B
4	(c.f.)..FGR	....	126	162	42000	13000	12.00/24D	12.00/24	Wau 145GK	6-5¼x6	779	5.7	580	185-2000	7-3½x17¾	Y	Own FA	6	Own FCR	2	H	7.5-9.0	Own FCR	O4IA	585	890	D	FI	89	14x3¾x½	B
5	Ward La Fr..FD1	....	....	....	35000	▲11500	11.00/22	11.00/22	Cont 6513	6-4½x5¾	513	5.9	405	180-2800	....	..	Ful 5A620	5	Tim R462W	.....	..	** -8.15	Tim F3100W	BW4IA	....	....	Co	....	.....	10x3x3/16	....
6	(D)........FD2	....	....	....	35000	▲12000	11.00/24	11.00/24 ■	Cum HB600	6-5⅛x6	743	13.	500	150-1800	....	..	Ful 5A920	5	Tim R462W	.....	..	** -8.15	Tim F3100W	BW4IA	....	....	Co	....	.....	10x3x3/16	....
7	Willys Jp...CJ-2A	1220*	80	80	3500	*2169	6.00/16	7.00/15	Own CJ-2A	4-3⅛x4⅜	134	6.5	105	60-4000	3-2.33x5.48	N	WG T90C	‡6	Spl 41-2	Hy½	H	** -5.38	Spl 25	B4IH	118	198	a	F		4x1¾x3/16	P
8	..........4WD	1725*	118	118	5300	*2920	7.00/16	....	Own 4WD	4-3⅛x4⅜	134	6.5	105	60-4000	3-2.33x5.48	Y	WGT90A	‡6	Tm1 5540NX3	S½	H	** -5.38	Spl 25	B4IH	176	276	a	2I	42.28	5½x2x3/16	TD
	Six-Wheelers Wheels ▼ Driven																														
9	Duplex....TH6	....	162	220	30000	9180	8.25/20	9.00/20	Her JXD	6-4x4½	320	6.2	240	113-3000	7-2½x10 11/16	Y	Fu 5B33△	10	Tim SBD1055	BF	L	**-6.16	Tim 32502H	L6IHV	513	839	A	TX	83¾	9⅛x3½x3/16	L
10	(D)..........L6	....	172	208	45000	15000	11.00/20	12.00/20	Cum HB600	6-4⅞x6	672	17.	495	150-1800	7-4½x16½	Y	Fu 5A920	5	Tim SD454	SF2	L	6.8-8.15	Tim 26450	Ws6IA	1137	1625	A	TX	77⅜	10⅛x3½x3/16	L
11	Federal....663MA	....	189	225	40000	14500	10.00/20	10.00/22	Con R6602	6-4⅞x5⅜	602	6.1	464	200-2600	7-3¼x14½	Y	Fu 5A65▼	15	T SW3012P	WF	R	** -6.16	Tim 36000TW	Ws6IA	1082	1569	a	TD	108	10⅛x3½x3/16	T
12	........664MAB	....	189	225	55000	15850	11.00/22	12.00/20	Con R6602	6-4⅞x5⅜	602	6.1	464	200-2600	7-3¼x14½	Y	Spi 7741▼	12	Tim SW456P	WF	R	** -7.6	Tim 27452W	Ws6IA	1308	1888	a	TD	108	10⅛x3½x3/16	T
13	.........664MA	....	189	225	55000	15950	11.00/22	12.00/20	Con R6602	6-4⅞x5⅜	602	6.1	464	200-2600	7-3¼x14½	Y	Spi 7741▼	12	Tim SD462P	BR	R	** -8.15	Tim 27452W	Ws6IA	1092	1624	a	TD	108	10⅛x3½x3/16	T
14	F.W.D.......M6x6	....	Opt	Opt	58000	▲21400	11.00/24D	11.00/24	Wau 145GK	6-5¼x6	779	6.2	585	186-2000	7-3½x17¾	Y	Own M	10	Wis SD462	2F	L	** -10.6	Wis F409	Ws6IA	1080	1680	a	T6	183	10 3/16x3x 11/32	P
15	(D)....M6X6D	....	Opt	Opt	58000	▲21600	11.00/24D	11.00/24	Bu DC844	6-5¼x6½	844	...	605	180-1800	7-3¾x17	Y	Own M	10	Wis SD462	2F	L	** -10.6	Wis F409	Ws6IA	1080	1680	a	T6	216	10 3/16x3x 11/32	P
	International (2)																														
16	......KB-6F.4R	3150	151	194	22000	7010	7.50/20D	8.25/20	Own BLD250	6-3 7/16x4½	251	6.3	200	100-3200	4-2⅜x5 11/16	N	Own F51	5	Own RF1450	SF	H	6.16-6.66	Own F470	LH41HV	495	869	c	PX	77	8 7/16x 3/32x 3/16	T
17	......KB-8F.4R	4700	161	215	27000	8670	8.25/20D	9.00/20	Own RED361	6-4⅛x4½	361	6.3	282	126-3000	7-3¼x10 11/16	Y	Own F52	5	Own RF1560	SF	H	6.50-7.16	Own F550	LH61HV	644	1105	c	PX	84	9¼x3 5/16x⅜	T
18	.....KB-11F.4R	7125	161	215	37000	10830	9.00/20D	10.00/20	Own RED450	6-4⅝x5	451	6.3	360	148-2600	7-3¼x10 11/16	Y	Own F54	5	Own RF1670	SF	H	** -7.16	Own F760	TW61A	738	1179	G	PX	84	10x3 5/16x⅜	T
19	.......W4064L	12925	203	239	40000	15750	10.00/22	11.00/22	Cum HB600	6-4⅞x6	672	17.	492	150-1800	7-4½x....	Y	Spi 7741	4	Tim SW3012	WF	L	4.71-6.16	Own 82F	BW41A	876	.....	...	PX	108	10x3½x3/16	C
20	......W4564OH	13750	188	242	45000	16635	10.00/22	11.00/22	Cum HB600	6-4⅞x6	672	17	492	150-1800	7-4½x....	Y	Spi 7741	4	Tim SW456	WF	H	6.00-7.6	Own 83F	BW41A	1020	.....	...	PX	90	10x3½x3/16	L
21	......W6564OH	15700	206	302	65000	19895	11.00/24	12.00/24	Cum HB600	6-4⅞x6	672	17.	492	150-1800	7-4½x....	Y	Spi 7741	4	Tim SD466	2F	H	8.15-11.66	Own 82F	BW41A	....	.....	...	PX	108	10x3½x3/16	L
	Kenworth																														
22	.....(D)....522	....	187	245	43000	12900	10.00/20	11.00/22	Cum HB6	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 8241	4	Tim U200P&†	....	..	....	Tim 36000TW	Ws41A	1135	.....	...	....	.....	9⅛x3¼x3/16	....
23	.....(D)523.4R	....	193	241	41000	14600	10.00/20	11.00/22	Cum HB6	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 8241	4	Ti SW3012PA	WF	R	** -6.16	Tim 36000	Ws4rIA	924	1248	a	TD	102	9⅛x3¼x3/16	C
24	.....(D)524.4R	....	193	241	54000	15100	10.00/20	11.00/22	Cum HB6	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 8241	4	Tim SW456	WF	R	6.0 -7.6	Tim 36000	Ws4rIA	819	1192	a	TD	102	9⅛x3¼x3/16	C
25	..........528.4R	....	186	234	40000	12500	10.00/20	10.00/22	Bud L0525	6-4½x5½	525	5.5	385	150-2200	7-3x11½	Y	Fu 5A620	5	Ti SW3012PA	WF	R	** -6.16	Tim 35100	Ws4rIA	924	1248	a	TD	102	9⅛x3¼x3/16	C
26	.....(D)548.4R	....	193	241	54000	17000	11.00/22	12.00/24	Cum HB6	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 8241	4	Tim SD462	DR	R	** -8.15	Tim 36000	Ws4rIA	819	1192	a	TD	109	9⅛x3¼x3/16	dbC
27	.....(D)552.4R	....	255	255	54000	20700	13.00/24	13.00/24	Cum HB6	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 8241	4	Tim SD462W	WF	R	** -8.15	Tim F3200W	Ws4rIA	1109	1192	a	TD	168	9⅛x3¼x3/16	dbC
28	(D)..........825	....	193	241	42000	14900	10.00/20	11.00/22	Cum HB6	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 8241	4	TGSW458P	WF	..	6.0-7.6	Tim 36000	Ws4rIA	1016	....	a	TD	102	9⅛x3¼x3/16	C
29	829	....	186	234	42000	14650	10.00/20	11.00/22	Bud LO525	6-4½x5½	525	5.5	385	150-2200	7-3x11½	Y	Fu5A620	5	TSD3010P	DR	R	-8.27	Tim 36000	Ws4rIA	924	....	a	TD	104	9⅛x3¼x3/16	....
	Marmon-Herr.																														
30	(C).........R5-6	....	156	....	22500	▲6673	7.50/20D	7.50/20	Ford	8-3 3/16x3¾	239	6.4	180	100-3800	3-2½x4.71	N	Ford	4	Timken	S	H	** -6.67	Own M5	M	503	....	a	F	82 3/16	7½x3x¼	C
31	(C).........R6-6	....	180	....	22500	▲6710	7.50/20D	7.50/20	Ford	8-3 3/16x3¾	239	6.4	180	100-3800	3-2½x4.71	N	Ford	4	Timken	S	H	** -6.67	Own M5	M	503	....	a	F	106¼	7½x3x¼	C
32	........MH440-6	....	182	....	34000	▲10600	9.00/20	10.00/20	Her WXLC3	6-4¼x4¾	404	5.4	239	118-2800	7-2⅝x13¼	Y	Fu 5A430	5	Own 1123	2B	H	** -8.43	Own 121	Ws..A	876	....	C	F	96	9 11/16x3x¼	T
33	.......MH-555-6	....	182	....	42000	▲14900	11.00/20	11.00/20	Her RXC	6-4⅝x5¼	529	6.3	390	131-2200	7-3x13¼	Y	Fu 5A620	5	Own 1124	2B	H	** -8.15	Own 122	Ws..A	1092	1608	...	F	93	10 3/16x3x3/16	T
34	(C)...R5-COE6	....	156	180	22500	......	7.50/20D	7.50/20	Ford	8-3 3/16x3¾	239	6.4	180	100-3800	3-2½x4.71	N	Ford	4	Ford	S	H	6.67	Own	F...H	303	563	A	F	.....	7.08x2.8x¼	T
35	(C)..........Q-5	....	136	....	21500	......	9.00/20	10.00/20	Ford	8-3½x4⅜	337	6.4	255	145-3600	3	..	Ford	5	Ford	H	H	6.80	Own	F...H	350	583	A	F	61	9x3x¼	T
36	(C)..........Q-6	....	160	....	21500	▲7300	9.00/20	10.00/20	Ford	8-3½x4⅜	337	6.4	255	145-3600	3	..	Ford	5	Ford	H	H	** -6.80	Own	F...H	350	583	A	F	85	9x3x¼	T
37	..............Q-7	....	196	....	21500	▲7500	9.00/20	10.00/20	Ford	8-3½x4⅜	337	6.4	255	145-3600	3	..	Ford	5	Ford	H	H	** -6.80	Own	F...H	350	583	A	F	85	9x3x¼	T
38	(C).......Q-5-6	....	160	....	35000	▲9000	9.00/20	10.00/20	Ford	8-3½x4⅜	337	6.4	255	145-3600	3	..	Ford	5	Ford	....	H	** -6.80	Own	F...H	350	583	...	F	85	9x3x¼	T
39	(C).......Q-6-6	....	184	....	35000	▲9300	9.00/20	10.00/20	Ford	8-3½x4⅜	337	6.4	255	145-3600	3	..	Ford	5	Ford	....	H	** -6.80	Own	F...H	350	583	...	F	109	9x3x¼	T
	Oshkosh																														
40	......W703-6X6	....	Opt	Opt	47000	16950	11.00/20D	12.00/20	Her RXLD	6-4¾x5¼	558	5.4	430	150-2200	7-3½x13¼	Y	Fu 5A650	12	Tim SD454W	2F	H	** -6.31	Own-Tim	L6IH	1080	1625	G	TX	Opt	10⅛ 3½ ⅜	B
41	(D)...W1600BD	....	245	Opt	60000	22770	11.00/24D	12.00/24	Bu 6DC844	6-5¼x6½	844	...	600	180-1800	7-3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** -6.14	Own-Tim	LT61A	1080	1625	G	TX	160	12⅜-3⅞-⅜	B
42	(D)§W1600BDH	....	267	Opt	60000	24300♦	11.00/24D	12.00/24	Bu 6DC844	6-5¼x6½	844	...	600	180-1800	7-3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** -9.82	Own-Tim	LT61A	1080	1625	G	TX	174	12⅜-3⅞-⅜	B
43	(D)§W1602BDH	....	272	Opt	95000	29300	14.00/24D	14.00/24	Bu 6DC844	6-5¼x6½	844	...	600	180-1800	7-3¾x17	Y	Fu 4BI86	12	Tim SD472	2F	H	** -13.9	Own-Tim	LT61A	....	2217	G	TX	177	12⅜-3⅞-⅜	B
44	.......W1600BG	....	245	Opt	60000	22770	11.00/24D	12.00/24	Bu MO893	6-5⅝x6	893	...	625	200-1800	7-3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** -9.82	Own-Tim	LT61A	1080	1625	G	TX	160	12⅜-3⅞-⅜	B
45	(D)...W1600CD	....	259	Opt	60000	23400♦	11.00/24D	12.00/24	Cum 6HBI	6-4⅞x6	672	...	500	150-1800	7-4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** -6.14	Own-Tim	LT61A	1080	1625	G	TX	174	12⅜-3⅞-⅜	B
46	(D)..W1600CDS	....	259	Opt	60000	23700♦	11.00/24D	12.00/24	Cum 6HBIS	6-4⅞x6	672	...	635	200-1800	7-4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** -9.82	Own-Tim	LT61A	1080	1625	G	TX	174	12⅜-3⅞-⅜	B
47	(D)..§W1600CDH	....	265	Opt	60000	24000♦	11.00/24D	12.00/24	Cum 6HBI	6-4⅞x6	672	...	500	150-1800	7-4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** -9.82	Own-Tim	LT61A	1080	1625	G	TX	172	12⅜-3⅞-⅜	B
48	(D).§W1600CDSH	....	267	Opt	60000	24300♦	11.00/24D	12.00/24	Cum 6HBIS	6-4⅞x6	672	...	635	200-1800	7-4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** -6.14	Own-Tim	LT6IA	1080	1625	G	TX	174	12⅜-3⅞-⅜	B
49	Peterbilt(D)344DT	....	189	Opt	43000	16250	10.00/20D	11.00/22	Cum HB600	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	Spl 7741	12	Tim SW3012W	WF	A	6.00- 8.5	T 36000W	Ws6IA	1212	1734	a	FD	106½	10⅜x3½x 9/32	TL
50	(D).......345DT	....	187	Opt	54000	17300	10.00/20D	11.00/22	Cum HB600	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	Spl 7741	12	Tim SW456W	WF	A	6.00-10.2	T 36000W	Ws6IA	1450	1626	a	FD	106½	10⅜x3½x 9/32	TL
51	(D).......354DT	....	187	Opt	56000	17450	10.00/20D	11.00/22	Cum HB600	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	Spl 7741	12	Tim SW456W	WF	A	6.00-10.2	T 27454W	Ws6IA	1450	1626	a	FD	106½	10⅜x3½x 9/32	TL
52	(D).......355DT	....	187	Opt	56000	17900	10.00/20D	11.00/22	Cum HB600	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	Spl 7741	12	Tim SD462W	2F	A	** -8.15	T 27454W	Ws6IA	1000	1626	a	FD	106½	10⅜x3½x 9/32	TL
53	Reo.....D-236, 4R	....	169	200	47000	13060▲	10.00/20	10.00/20	Con T-6427	6-4 5/16x4⅞	427	6.2	336	153-2800	7-2⅞x13.6	Y	Cla270V-VO■	15	Tim SD3010	SF2	T	7.5	Tim 36000	Ws41A	1072	1570	var	TD	104⅝	9⅛x3 1/16x3/16	TfP
54	.........316, 4R	....	186	248	56000	16000▲	10.00/20	10.00/20	Con R-6602	6-4⅞x5⅜	602	5.9	464	203-2800	7-3¼x14.7	Y	Spi6252A-53‡	15	Tim SD454	SF2	T	7.33-8.15	Tim 36000	Ws41A	1082	1778	var	TD	108	10¼x3⅛x⅜	TfP
55	Sterling...HBS130	....	164	183	32000	11000	8.25/20	10.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2⅝x12½	Y	Fu 5A43	5	T-SBD1555DPH	SF	L	6.80-13.14	T-35011H	T61HV	664	1134	A	TX	83	9x3¼x¼	A
56	.........HDS140	....	164	183	36000	11800	9.00/20	10.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2⅝x12½	Y	Fu 5A43	5	T-SD3010PA	2F	L	6.84-10.22	T-35011TW	Ws6IA	1074	1554	A	TX	83	9x3¼x¼	A
57	.........HWS160	....	164	183	42000	12800	10.00/20	11.00/22●	Wau 6SRKR	6-4⅝x5⅛	517	5.5	368	125-2250	7-3x13⅞	Y	Fu 5A62	5	T-SW3010PA	WF	L	5.40-8.50	T-36000TW	Ws6IA	1082	1574	A	TX	83	9x3¼x¼	A

(Turn to page 103, please)

▼ Auxiliary transmission Spicer 703F with 3 forward speeds.
△ Torque divider, Timken T70-2 speed.
‡ Three speed transmission—2 speed transfer case.
▲ Includes cab. ■ 6231 Spicer Auxiliary Transmission.
‡ 8031F-G Spicer Auxiliary Transmission Available.
* Complete vehicle with pick-up type body.
§ Hydraulic Coupling. †Timken T13126 PA Trailing Axle.
♦ Chassis Weights on Duals Front, Center and Rear.
● When 11.00/22 tires are required it is necessary to furnish 52 inch axle spacing.

USER REPORT

.."a driver in our service has never had an accident due to brake failure."

The experience of Mr. Bradley and the Sunset Motor Lines, during 11 years of every-day use of Warner Electric Brakes on their tractor-trailer fleet, is typical of the kind of service you, too, can expect when your trailers are equipped with Warner Electric Brakes.

They provide an entirely new concept of effective stopping power. Being electrically operated there is no time lag in getting instantaneous action regardless of the distance between cab and rear trailer wheels. They develop their stopping power within the brake itself. Always *controlled* braking power — driver sets "Vari-load" dial on dash to meet load and road conditions.

For maximum performance and satisfaction, standardize on WARNER ELECTRIC BRAKES. Write for illustrated literature, explaining all their many advantages.

WARNER ELECTRIC BRAKE MFG. CO.
BELOIT, WISCONSIN

..65 trailers WARNER EQUIPPED never in an accident due to Brake Failure

WARNER
THE ORIGINAL AND PROVEN
ELECTRIC BRAKES
SINCE 1927

Continued from Page 100)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES Standard Front and Rear	TIRE SIZES D-dual rear S-single rear Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Sterling, Cont'd																														
1	HWS235		182	193	52000	15700	11.00/24		Wau 145GK	6—5½x6	779	6.2	585	186–2100	7—3½x17¾	N	Fu 4B86	4	T-SW456P	L	5.67–8.20	T-27454W	W61A	1308	1892	A	TX	92	9¼x3⅜x⅜	A
2	(D) HWS160H		182	193	42500	12250	10.00/20		Cum HB600	6—4½x6	672	17	500	150–1800	7—4¼x16½	Y	Fu 4B86	4	T-SW3012PA	W	5.71–6	T-36000TW	W61A	1093	1574	A	TX	92	9¼x3⅜x⅜	A
3	(D) HWS235H		182	193	52000	16000	11.00/24		Cum 140GK	6—4½x5½	525	6.4	420	142–2200	7—3¾x13⅜	Y	Fu 4B86	4	T-SW456P	L	5.66–8.20	T-27454W	W61A	1308	1892	A	TX	92	9¼x3⅜x⅜	A
4	HCS195		170	193	60000	17500	12.00/24		Wau 145GK	6—5½x6	779	6.2	585	186–2100	7—3¾x17¾	Y	Fu5A62–3A92	15	T-SW3012PA	W	6.04–7.31	T-36000TW	W61A	1082	1802	A	TX	92	9¼x3⅜x⅜	A
5	HCS207		182	193	70000	20750	12.00/24▲		Wau 145GK	6—5½x6	779	6.2	585	186–2100	7—3¾x17¾	Y	Fu 4B86♦	12	Own 265W	CD	R 9.21–13.16	T-27454W	W61A	1160	1912	A	JX	92	9¼x3⅜x⅜	AL
6	HCS330		174	187	80000	23150	12.00/24		Wau 145GK	6—5½x6	779	6.2	585	186–2100	7—3¾x17¾	Y	Fu 4B86♦	12	Own 330W	CD	R 9.21–13.16	T-27454W	W61A	1280	1988	A	JX	92	9¼x3⅜x⅜	AL
7	HCS195H		182	193	48000	16000	11.00/22		Cum HB600	6—4½x6	672	17	500	150–1800	7—4¼x16½	Y	Fu4B86–3A92	12	Own 195W	CD	R 6.04–7.31	T-36000TW	W61A	1082	1802	A	JX	91	9¼x3⅜x⅜	AL
8	(D) HCS265H		182	193	60000	18100	11.00/20		Cum HBD600	6—4½x6	672	17	500	150–1800	7—4¼x16½	Y	Fu 4B86♦	12	Own 265W	CD	R 9.21–13.16	T-27454W	W61A	1160	1912	A	JX	92	9¼x3⅜x⅜	A
9	(D) HCS297H		182	193	70000	21050	12.00/24●	13.00/24▲	Cum HBD600	6—4½x6	672	17	500	150–1800	7—4¼x16½	Y	Fu 4B86♦	12	Own 330W	CD	R 9.21–13.16	T-27454W	W61A	1280	1988	A	JX	92	9¼x3⅜x⅜	AL
10	(D) HCS330H		174	187	80000	23450	12.00/24	14.00/24▲	Cum HBD600	6—4½x6	672	17	500	150–1800	7—4¼x16½	Y	Fu 4B86♦	12	Own 330W	CD	R 9.21–13.16	T-27454W	W61A	1280	1988	A	JX	91	12x3½x⅝	AL
11																															
	Truckstell																														
12	(C) F2X26 2F		156	237	26000	♣5900	7.50/20	8.25/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	4	Ford												
13	(C) F2X27-0 2F		156	237	27000	♣6450	7.50/20	9.00/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	8	Eat 1350	SF	5.83–8.11	Ford									
14	(C) F2X34 2F		156	237	34000	♣8335	7.50/20	9.00/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford and BL	12	Cla R1250	SF	5.67–6.83	Ford									
15	(C) F4X26 4R		135	224	34000	♣8535	7.50/20	9.00/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	8	Ford	SF	5.67–10.5	Ford									
16	(C) F4X27-0		144	210	34000	♣8300	7.50/20	8.25/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	8	Ford	SF	6.07–10.5	Ford									
17	(C) F4X34 4R		117	180	27000	♣6300	7.50/20	8.25/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	8	Eat 1350	Sfd	7.47–12.9	Ford									
18	(C) F4X27-0		114	210	30000	♣7000	7.50/20	8.25/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	16	Eat 1350	Sfd	7.47–12.9	Ford									
19	(C) F4X34 4R		114	210	30000	♣7000	7.50/20	8.25/20	Ford	8—3⅝x3¾	239	6.4	180	100–3800	3—2¾x4.71	N	Ford	16	Eat 1350	Sfd	7.47–12.9	Ford									
20	(C) C2X26 2F		157	234	29000	♣5800	7.50/20	8.25/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	Chevrolet	4	Chevrolet	SF	...	...	C61HV	546	780	C0	21	82¼	7½x3⅜x.47	CTf
21	(C) C2X28 2F		157	234	28000	♣6500	7.50/20	8.25/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	Chevrolet	8	Tim	Sfd	5.64–8.22	Chevrolet	C61HV	546	780	C0	21	82¼	7½x3⅜x.47	CTf
22	(C) C2X34-0		141	224	34000	♣8590	7.50/20	9.00/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	C and BL	8	Cla R1250	Sfd	5.67–6.83	Chevrolet	C61HV	659	1033	C0	TX	82¼	9½x3⅜x.50	CTf
23	(C) C2X34 2F		157	234	34000	♣8420	7.50/20	9.00/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	C and BL	12	Cla R1250	SF	5.67–6.83	Chevrolet	C61HV	659	1033	C0	TX	82¼	9½x3⅜x.50	CTf
24	(C) C4X26 4R		145	212	26000	♣6120	7.50/20	7.50/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	Chevrolet	8	Chevrolet	SF	6.41–11.1	Chevrolet	C61HV	546	780	C0	21	82¼	7½x3⅜x.47	CTf
25	(C) C4X27-0		117	184	27000	♣6215	7.50/20	7.50/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	Chevrolet	8	Eat 1350	Sfd	7.47–12.9	Chevrolet	C61HV	546	780	C0	21	82¼	7½x3⅜x.47	CTf
26	(C) C4X29 4R		145	212	29000	♣6880	7.50/20	8.25/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	Chevrolet	16	Eat 1350	Sfd	7.47–12.9	Chevrolet	C61HV	512	836	C0	TD	63	7½x3⅜x.47	CTf
27	(C) C4X30-0		117	184	30000	♣7290	7.50/20	8.25/20	Chevrolet	6—3⅜x3¾	235	6.6	192	93–3100	4—2¾x5.38	N	Chevrolet	16	Eat 1350	Sfd	7.47–12.9	Chevrolet	C61HV	512	836	C0	TD	63	7½x3⅜x.47	CTf

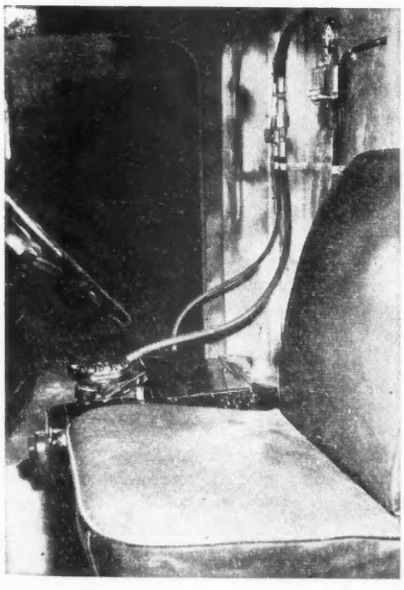
♣Includes Cab. ▲ Rear only; Front 12.00/24. ● Rear only; Front 11.00/24. ♦ Auxiliary transmission, Spicer 8031.

New Refrigeration System Powered by Truck's Engine

Refrigerated trucks of all types—from the small panel job for local hauling of meats, ice cream, flowers, or frozen foods to the largest highway semi-trailer for intercity transport are said to derive benefits and savings from a new truck refrigeration system being introduced by Coldmobile Co., Detroit.

Known as the "Coldmobile System", its chief feature is that it is powered directly off the truck's 6-volt electrical system and uses standard refrigeration equipment, with the exception of the 6-volt motor to drive the condensing unit. The additional electrical power necessary to drive the condensing unit motor is supplied by a special 6-volt generator, which is also connected to the truck electrical system.

A special generator which replaces the standard truck generator furnishes the power necessary to drive the refrigeration unit



Standard panel type blower coils may be employed with the Coldmobile truck refrigeration system 100 cu ft insulated refrigerated space can be built into a standard panel delivery truck

This generator replaces and mounts in the same position as the standard "low output" generator supplied as standard equipment by truck manufacturer. Due to its design, the special generator provides a constant source of power for driving the refrigeration unit as well as the vehicle's electrical system over the broad range of motor speeds from idling to top driving speed.

The "Coldmobile System" is available in sizes from ¼ up to and including 2 hp for

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The refrigeration condensing unit can be mounted on the floor of a panel delivery truck beside the driver's seat. At upper right are the thermostat and the thermometer

WASHINGTON RUNAROUND

Federal Cars to Be Replaced at 60,000 Miles . . . . Primary Business Test Is Reaffirmed

New Safety Rules Draft . . . . Transport Study Underway . . . . Modified Uniform Code Approved

New Standard For Federal Cars Six Years Or 60,000 Miles

by GENE HARDY

CCJ Washington Correspondent

As forecast by COMMERCIAL CAR JOURNAL (February, 1948, page 74), the Bureau of the Budget has issued a replacement standard for Federally-operated passenger cars permitting replacement after six years or 60,000 miles of operation. Applying to more than 20,000 passenger vehicles in use by civilian agencies, the new standards will be inaugurated during the fiscal year beginning July 1, 1949.

COMMERCIAL CAR JOURNAL has also learned that the work on replacement standards for trucks and other heavy vehicles is proceeding satisfactorily under the guidance of the Interdepartmental Motor Equipment Committee. A tentative standard for light trucks has already been worked out. Heavier vehicles are still under study. The standards are based on a pattern of years and miles, by type of unit. However, the truck standards are not likely to be finished this year.

Also of interest to fleet operators is the forthcoming release, expected sometime this month, of a series of preventive maintenance standards for government vehicles.

While the standards being worked out by the Committee will greatly improve federal motor vehicle management and also be of some value to private operators, fears have been expressed in some quarters that these standards might set a precedent which could have damaging effects. For example, it is not inconceivable that at some later date the Bureau of Internal Revenue might decide it would be wise to use these standards in determining depreciation allowances.

Regarding the new passenger car standards, the Bureau of the Budget stated that requested replacements for vehicles not meeting the new standards will have to be fully justified, taking into consideration abnormal wear and tear, or other unusual conditions.

Primary Business Reaffirmed

The primary business test was reaffirmed last month by Division 5 of the ICC as the basic test for distinguishing between private and for-hire carriage in its decision in the Schenley Distillers Corporation case. In stronger language than the preceding Lenoir case, which brought loud huzzas from private carrier interests, Division 5 ruled that Schenley was not engaged in common or contract carriage.

The majority opinion stated:

"The primary business of the transporter is the basic test, not the fact that some compensation identifiable as such or hidden is collected. Compensation for transportation may be collected by a private carrier as such or indirectly and it may even include an incidental element of profit provided the transportation is not 'for compensation' in the profit as a carrier. To be a common or contract carrier by motor vehicle, there must be transportation for compensation by one so engaged as a business and with an intent or purpose to profit from the compensation."

In the Schenley case it was found that the corporation's primary business is the sale and distribution of alcoholic liquors; that its outbound operations were in furtherance of such primary business and not with any purpose to profit from transportation as such—and consequently private carriage; and that its inbound operations closely approximate those of a gratuitous bailee who indirectly recaptures all of its costs, however, without receiving any compensation as such or any profit.

It is not unlikely, however, that this decision will be argued before the full Commission at the request of the for-hire interests. In addition, rail carriers have also indicated that they will carry the earlier Lenoir case to the full Commission.

Also within recent weeks, an ICC examiner in a proposed report to the Commission in its investigation into the trucking operations of the Burlington Mill Corp., ruled that these operations constitute private carriage and recommended discontinuance of the proceeding. The Commission may reject or adopt the examiner's findings when the final decision is reached.

Relying heavily on previous cases, including the precedent-setting Woitishek case, the examiner stated:

"The issue of for-hire versus private carriage has been considered by the Commission in several proceedings. The controlling consideration in each was the primary business of the applicant . . . the carrier-for-hire status in each proceeding has turned upon the sole question of fact as to the primary business of the transporter."

New Safety Rules Draft

The Section of Safety, ICC Bureau of Motor Carriers, has completed the second draft of Parts 1 to 6 of the revised motor carrier safety regulations and submitted it to the Director of the Bureau of Motor Carriers for approval or change. This second draft will be used as a basis for public hearings, which will probably get underway early in the fall. The revision of Part 7, pertaining to explosives and other dangerous articles, has not been completed. Hearings on this portion of the regulations will probably be held separately as were the original informal conferences.

Transport Study Under Way

The first phase of the Highway Research Board's study of the economics of motor vehicle sizes and weights, the vehicle performance survey, got underway in Pennsylvania on July 12.

Ultimate purpose of the study is to determine economic load limits for transport vehicles, taking into account transportation requirements the cost of hauling, and highway costs.

This is the first time highway research authorities have undertaken a broad investigation in this country to establish the cost per ton-mile in hauling loads of various sizes by trucks over a highway of modern design and over a route embodying low standards of design, typical of a large mileage of roads still in use.

The study, a cooperative effort on the part of government and industry, is part of the research program of the Board's Committee on Economics of Motor Vehicles Size and Weight.

This initial phase of the study, consisting of test runs, will be carried on through August and most of September. The test runs are being made over a course of 148.5 miles from Carlisle, Pa., to a point near

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Building America's *New Horizons*

15-BILLION *dollars worth of new building and another 7-billion for maintenance and repair work are 1948 goals of the construction industry. Advanced techniques and time-saving mechanical equipment, such as the ready-mix concrete truck unit pictured here, enable the modern contractor to build better in far less time than ever before.*

FEW AMERICANS are ever out of sight of things built by the construction industry. Your home... the places where you work and play ... the roads and streets you travel ... all the things that make modern living possible are products of America's biggest business, next to agriculture — *construction.*

Accustomed to creating products with extremely long life, building contractors use high-quality, long-life equipment as a matter of course. They know the economy of quality trucks, designed for each particular job... and the expensive short-comings of a "bargain." That's why Super Power Whites are preferred in fleets of leading quality builders. The wisest truck investment for any service is one based on the performance, long life and economy of White quality. Your local White Representative will gladly provide facts and figures in terms of your own business.

White

THE WHITE MOTOR COMPANY
Cleveland, Ohio, U. S. A.
THE WHITE MOTOR COMPANY OF CANADA LIMITED
Factory at Montreal

FOR MORE THAN 45 YEARS THE GREATEST NAME IN TRUCKS

Washington Runaround

(CONTINUED FROM PAGE 106)

Greensburg, Pa., comprising almost the entire length of the Pennsylvania Turnpike, and over US 11 from Carlisle to Chambersburg, then on US 30 to Greensburg, a distance of 149.3 miles.

Trucks used in the test runs range in size from a 2-axle single-unit truck to a 3-axle tractor hauling a 2-axle semi-trailer and a 2-axle trailer. Gross loads, with varied axle distribution, range from 20,000 to 142,000 lb.

Each vehicle will be operated with axle loads of 14,000, 18,000 and 22,000 lb thus providing considerable overlapping of gross vehicle weights between vehicles of different types and affording comparison of the performance ability of vehicles with similar gross weights but with different power ratios.

Speed, gasoline consumption, and wheel slippage on known grades will be recorded. Data on the volume and speed of general traffic on the test routes also will be collected to indicate the conditions under which the test runs were made. Stresses in selected bridges, caused by the heaviest test trucks while standing and while moving at speeds up to 50 miles an hour, will be measured. Special stress-measuring equipment has been loaned for the purpose by the Association of American Railroads.

Analysis of the factual data compiled during the test runs will establish the direct cost (fuel consumption and driver's wages) of operation per ton-mile for vehicles of various gross weights traveling over a relatively good and a poor route through rough terrain.

Uniform Code Modified

The National Committee on Uniform Traffic Laws and Ordinances last month approved the report of its size and weight subcommittee, which changes the provisions of Act V of the Uniform Act Regulating Traffic on Highways to permit a 50-ft truck-tractor semitrailer or truck-full trailer combination. The Act previously specified a 45-ft limit.

The size and weight proposals, as they will appear in the revised act will be: height, 12½ ft; length of a single vehicle, 35 ft; 3-axle buses, 40 ft; truck-tractor semitrailer or truck-full combination, 50 ft, with a note recognizing the 60-ft limitation approved by the American Association of State Highway Officials. Gross weights based on 18,000-lb axle loads were approved as was a table of gross vehicle weights adopted from the proposal of the AASHO.

While these acts have no official standing they are frequently accepted by state governments as a guide when enacting vehicle regulations.

The special size and weight subcommittee was continued and was directed to review the findings of the Highway Research Board's study of the economics of sizes and weights of motor vehicles to determine whether upward revisions should be made as a result of these and other findings.

No action was taken on the proposal advancing for discussion of the 375 lb of weight per net brake horsepower performance ability standards submitted by the subcommittee.

German Roads Well Built

A report on the German motor road system prepared by British experts, and announced by the Department of Commerce, comments favorably on highway construction in prewar Germany. The German motor road system is unique in being the only modern network built on a national scale, according to the report. The roads are generally of high quality and defects are infrequently noted. Referring to road development in Great Britain, the report states that whatever course it may take "it is clear that British practice should profit as much as possible from the German example."

Normal riding surfaces were found to be as good as, but not superior to British counterparts. Road design and foundation treatment have generally eliminated cracking due to subsurface failure, while the quality of concrete has enabled surfaces to withstand frost action and abrasion from traffic.

The report takes critical note of the fact that the "bankettes" or edge strips used to mark the side of roadways and make space for parked vehicles do not always provide sufficient contrast with the roadway itself; nor are they wide enough to permit stopped vehicles to be completely clear of traffic.

1948 New Truck Registrations by Makes by States*

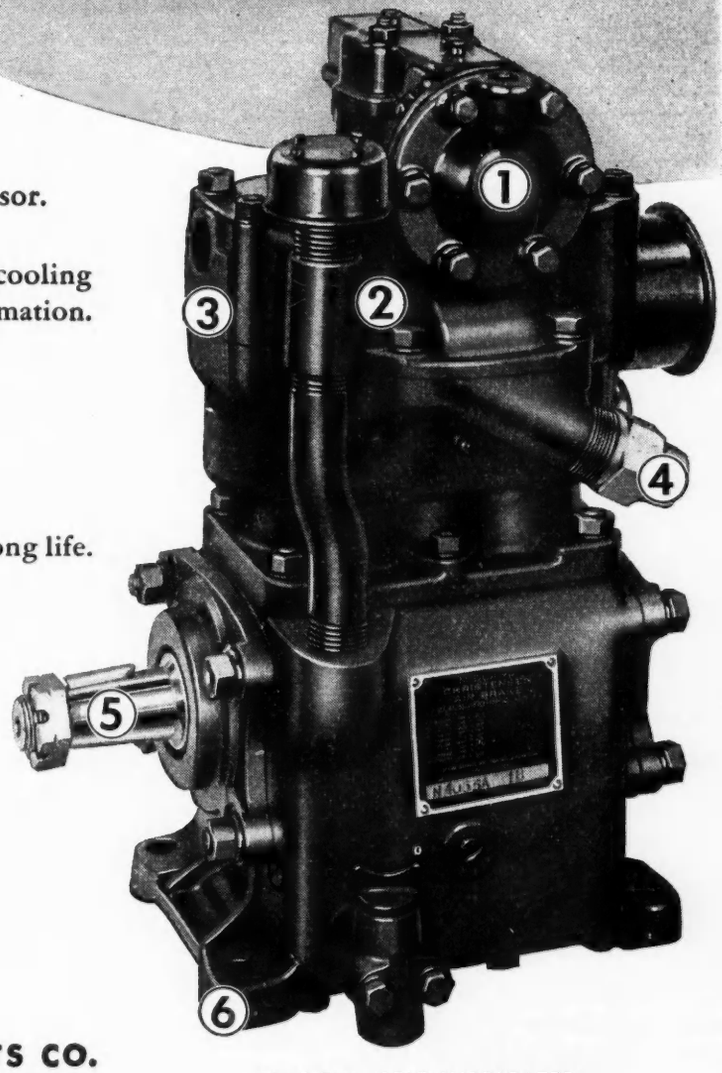
STATE		Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Mack	Osh-kosh	Reo	Ster-ling	Stude-baker	Ward La France	White	Willys	All Others	Total
Alabama	May	....	....	618	8	3	206	1	670	....	103	276	12	....	29	....	40	....	18	173	3	2,158
	5 Mos.	....	....	3065	38	15	948	18	2320	....	622	1085	72	....	124	....	313	....	74	698	12	9,404
Arizona	May	1	....	129	4	3	52	3	127	....	35	61	2	....	6	....	25	....	1	25	3	477
	5 Mos.	1	....	678	4	9	263	6	432	2	153	201	6	....	41	5	138	....	28	122	10	2,101
Arkansas	May	....	....	671	7	....	170	4	575	....	128	202	10	....	40	....	48	....	9	221	2	2,087
	5 Mos.	....	....	3330	52	....	952	21	2430	3	575	1004	33	....	175	....	359	1	55	925	5	9,920
California	May	34	1	1669	19	68	957	6	1524	....	535	381	52	....	18	14	331	....	27	540	62	6,238
	5 Mos.	99	16	7347	165	205	3777	35	5751	8	2366	2344	143	6	115	55	1574	....	161	1398	178	25,802
Colorado	May	....	....	326	13	3	117	8	305	5	61	166	4	....	10	....	32	....	6	118	....	1,174
	5 Mos.	7	....	1461	63	27	550	28	1363	30	335	895	12	....	42	....	237	....	35	455	6	5,546
Connecticut	May	8	5	234	21	22	127	11	258	1	72	118	29	....	6	2	43	....	14	85	3	1,059
	5 Mos.	40	41	896	61	50	411	41	732	8	209	466	78	....	29	2	211	....	49	158	16	3,645
Delaware	May	1	1	86	3	2	43	....	79	....	19	27	7	....	2	....	7	....	1	16	1	295
	5 Mos.	3	6	408	13	9	178	1	302	....	101	188	9	....	8	....	49	....	18	45	10	1,348
Dist. of Columbia	May	1	....	96	5	21	46	2	116	....	25	46	....	....	3	....	12	....	....	15	1	389
	5 Mos.	7	3	451	24	66	172	16	428	....	159	252	27	....	24	....	48	....	10	81	6	1,772
Florida	May	4	....	648	11	....	240	11	455	....	76	171	20	....	7	....	52	1	23	132	23	1,875
	5 Mos.	16	....	2796	71	11	922	41	1689	3	389	754	77	....	80	....	357	2	82	582	76	7,948
Georgia	May	....	....	734	14	1	239	3	580	....	99	214	14	....	20	....	43	....	13	135	4	2,113
	5 Mos.	2	1	4276	196	5	1365	41	3818	2	828	1941	143	....	196	....	663	....	123	1075	37	14,682
Idaho	May	....	....	304	9	2	105	3	284	....	88	141	3	....	28	....	92	....	7	126	19	1,211
	5 Mos.	1	....	813	29	6	319	16	602	1	244	423	8	....	49	....	280	....	30	276	31	3,128
Illinois	May	8	1	1475	111	38	593	15	1210	1	233	808	25	....	65	3	182	....	67	360	25	5,220
	5 Mos.	100	7	7242	547	248	2792	131	4105	7	1310	4212	225	....	411	4	1234	3	375	1612	175	24,740
Indiana	May	2	2	980	34	29	357	13	825	....	147	546	10	....	33	....	142	....	46	250	29	3,445
	5 Mos.	3	12	2969	126	91	1172	64	1988	4	667	1837	45	....	136	....	654	....	171	723	105	10,767
Iowa	May	....	....	539	36	11	176	3	495	....	93	327	6	....	22	....	30	....	18	149	3	1,908
	5 Mos.	1	....	2910	164	39	1180	12	2521	10	485	1665	43	2	140	....	475	2	82	903	19	10,653
Kansas	May	1	....	834	18	....	193	35	643	....	165	327	2	....	45	....	75	....	9	108	4	2,459
	5 Mos.	1	2	3477	111	15	1021	79	2299	2	533	1310	16	....	146	....	488	....	59	512	24	10,095
Kentucky	May	3	....	556	30	2	158	22	500	....	118	246	4	....	52	....	47	2	12	338	7	2,097
	5 Mos.	7	....	2751	98	18	891	84	2079	....	501	1204	40	....	192	....	309	6	65	1437	29	9,710
Louisiana	May	1	....	480	18	....	141	1	493	2	67	162	8	....	6	....	34	....	10	58	9	1,490
	5 Mos.	2	....	2202	44	15	712	9	1691	3	362	808	33	....	51	....	316	....	61	460	51	6,820
Maine	May	1	....	250	....	1	76	6	184	....	54	103	6	....	10	....	23	....	4	17	....	735
	5 Mos.	1	10	748	2	9	295	15	736	....	244	419	27	....	57	2	153	1	12	78	8	2,817
Maryland	May	5	15	404	8	11	165	3	279	....	50	165	22	....	16	....	28	....	11	62	4	1,248
	5 Mos.	25	54	2010	29	41	670	31	1202	8	326	759	79	....	61	3	223	3	64	268	18	5,874
Massachusetts	May	10	12	426	25	68	235	4	574	3	114	204	42	....	18	6	49	8	20	87	9	1,914
	5 Mos.	44	74	1951	93	197	960	22	1964	11	485	1024	123	4	79	35	353	11	79	331	36	7,676
Michigan	May	6	7	1307	23	48	556	35	1422	....	373	360	20	....	56	....	127	....	78	343	19	4,780
	5 Mos.	19	31	5038	108	204	2424	131	4628	4	1444	1645	82	....	245	1	640	4	212	1065	77	18,002
Minnesota	May	19	....	1373	47	14	539	59	677	....	189	644	23	1	76	1	114	2	32	275	8	4,093
	5 Mos.	30	....	2930	133	46	1297	115	2523	24	547	1932	68	6	105	9	595	6	124	603	30	11,123
Mississippi	May	....	....	500	11	....	136	5	441	....	89	138	14	....	20	....	35	....	6	55	2	1,452
	5 Mos.	....	....	2510	31	....	701	12	1855	....	430	763	55	....	82	....	240	....	31	522	10	7,242
Missouri	May	....	....	899	13	17	355	2	868	....	180	373	9	....	17	....	63	....	25	177	12	3,010
	5 Mos.	2	5	4693	119	100	1564	21	3238	....	801	1815	59	....	107	....	522	....	155	962	47	14,210
Montana	May	....	....	137	10	3	51	8	224	....	43	106	2	....	23	....	22	....	6	111	2	748
	5 Mos.	5	....	1090	41	5	458	34	996	5	274	766	7	1	88	....	267	4	32	530	20	4,623
Nebraska	May	....	....	372	35	....	136	1	301	2	71	204	7	....	5	....	19	....	19	137	2	1,301
	5 Mos.	....	....	1872	137	....	765	15	1533	8	344	1209	45	....	38	....	328	....	63	651	17	7,025
Nevada	May	....	....	48	3	....	30	....	53	2	15	19	1	....	2	....	18	....	....	16	4	211
	5 Mos.	....	1	158	10	1	110	1	150	3	62	73	1	....	3	....	70	....	2	42	7	734
New Hampshire	May	....	....	80	2	5	48	1	96	....	23	32	1	....	9	1	13	....	1	32	4	347
	5 Mos.	5	7	362	10	13	185	4	345	1	92	152	21	....	17	1	67	....	10	98	8	1,398
New Jersey	May	10	36	512	28	25	249	15	524	1	206	259	69	....	16	....	74	2	25	161	2	2,214
	5 Mos.	106	221	2569	143	152	1023	76	1905	10	855	1304	293	....	89	2	464	7	144	695	60	10,118
New Mexico	May	....	....	129	4	2	60	....	115	....	13	45	....	....	2	....	11	....	2	21	3	407
	5 Mos.	....	....	774	14	2	228	8	463	1	120	225	6	....	13	....	81	....	15	106	6	2,062
New York	May	34	90	1170	110	77	725	24	1049	6	296	653	141	4	58	3	156	14	111	347	31	5,099
	5 Mos.	296	567	5890	590	454	3788	323	4776	68	2332	3948	957	44	434	31	1334	117	538	1777	240	28,504
North Carolina	May	2	....	824	11	8	263	8	774	3	80	220	45	....	30	....	61	....	17	185	8	2,539
	5 Mos.	25	2	3813	46	34	1335	46	2805	4	391	1095	289	....	127	....	483	....	133	895	64	11,587
North Dakota	May	....	....	109	9	....	55	5	155	3	21	105	2	....	9	....	33	....	6	54	....	566
	5 Mos.	....	....	517	23	....	263	21	458	3	94	499	11	....	29	....	182	....	14	190	....	2,304
Ohio	May	8	1	1257	38	31	442	17	1111	....	269	551	33	....	52	....	97	....	92	368	13	4,380
	5 Mos.	47	15	5961	156	149	2613	133	4259	24	1434	2909	210	....	260	1	845	2	468	1307	112	20,905
Oklahoma	May	1	....	665	2	2	204	1	579	....	138	293	4	....	38	....	59	....	21	132	6	2,145
	5 Mos.	1	....	2748	15	14	902	17	2041	12	455	1217	24	....	116	....	301	....	76	586	22	8,547
Oregon	May	12	1	345	6	4	139	17	391	....	129	183	25	....	15	1	44	....	12	125	32	1,481
	5 Mos.	39	1	1762	44	10	800	37	1177	5	573	844	71	....	42	10	385	....	78	512	176	6,566
Pennsylvania	May	44	53	1294	81	18	711	35	1489	2	348	644	128	....	58	....	224	....	114	442	16	5,699
	5 Mos.	204	318	6467	319	72	3249	149	5132	6	1901	3293	544	25	307	28	1245	4	526	1619	128	25,536
Rhode Island	May	12	....	142	14	33	75	....	118	....	41	114	7	....	7	1	33	....	9	41	9	656
	5 Mos.	57	23	454	49	109	302	7	384	....	181	379	30	....	47	1	129	....	47	115	24	2,338
South Carolina	May	1	....	513	6	....	121	1	373	....	72	97	14	....	11	....	22	....	6	74	1	1,312
	5 Mos.	1	....	2045	22	1	676	9	1260	....	292	415	44	....	67	....	172	....	39	318	39	5,400
South Dakota	May	....	....	119	18	....	56	8	151	....	35	154	1	....	8	....	19	....	2	89	....	660
	5 Mos.	....	....	610	70	2	372	26	632	....	163	707	7	....	78	....	161	....	16	409	10	3,263
Tennessee	May	2	....	656	19	3	181	16	527	....	94	212	16	....	25	....	32	....	14	165	10	1,972
	5 Mos.	7	1	4171	130	26	1259	110	3209	2	1167	1919	147	....	177	....	552	....	182	947	73	14,079
Texas	May	3	3	2300	52	23	716	14	1992	2	428	955	32	....	63	....	215	....	73	506	61	7,438
	5 Mos.	14	20	9307	181	61	3148	70	6749	5	1672	3717	168	....	266	....	1248	2	389	2141	154	29,312
Utah	May	....	....	127	8	2	41	3	164	5	39	62	4	....	8	....	19	....	1	51	3	537
	5 Mos.	....	....	621	42	14	269	11	544	6	206	345	19	....	16	....	151	....	22	169	20	2,455
Vermont	May	3	6	25	1	3	20	1	88	....	24	52	4	....	11	3	52	4	10	143	8	458
	5 Mos.	3	10	414	13	8	163	14	506	1	166	382	40	6	33	3	133	9	16	258	17	2,195
Virginia	May	1	1	686	14	9	209	10	665	....	119	246	14	....	18	....	56	....	52	108	10	2,218
	5 Mos.	13	12	3070	64	31	1027	60	2209	....	481	980	50	....	98	....	364	1	124	527	58	9,167
Washington	May	1	....	358	13	12	198	3	574	....	91	205	24	....	8	....	65	....	8	104	8	1,672
	5 Mos.	11	....	2081	70	57	897	16	1611	10	514	1008	58	....	67	12	415	....	60	434	63	7,384
West Virginia	May	1	....	319	14	1	116	14	266	....	95	114	22	....	12	....	20	....	11	118	4	1,127
	5 Mos.	10	20	1359	29	15	622	44	969	5	455	483	93	....	58	1	174	6	77	571	27	5,018
Wisconsin	May	3	....	471	30	9	225	11	561	1	100	320	24	2	40	1	71	....	40	169	4	2,082
	5 Mos.	16	....	2714	137	58	1093	60	1951	41	511	1546	71	20	154	14	446	1	136	644	29	9,642
Wyoming	May	....	....	79	12	1	57	....	110	....	13	55	1	....	2	....	11	....	2	73	2	418
	5 Mos.	1	....	497	39	2	247	1	424	3	63	299	3	....	12	....	119	1	11	280	11	2,013
Total	May 1948	243	235	28276	1028	635	11110	488	26034	39	5916	12106	963	7	1135	36	3120	33	1111	7625	494	100,614
Total	May 1947	388	330	15689	920	425	11952	452	18939	73	4978	10616	925	19	1373	58	3745	34	1271	4112	602	76,901
Total	5 Months 1948	1272	1480	128318	4715	2716	51330	2282	97182	353	28914	58630	4712	114	5331	220	20547	192	5371	31259	2462	447,400
Total	5 Months 1947	2074	1864	95608	4216	1921	53875	2277	85357	534	22576	45284	3950	104	6091	239	17063	249	5537	16015	2788	367,622

*Data are from R. L. Polk & Co.

MIDLAND *is the Preferred* AIR BRAKE

Here's Why:

1. Governor is an integral part of compressor.
2. Unique patented inlet valves in head aid cooling — retard oil pumping and carbon formation.
3. Water cooled head and block.
4. Efficiently delivers more air for size.
5. Designed for high speed operation and long life.
6. Designed for all type mountings.



10 C.F.M. SELF LUBRICATED

Nation-Wide Service

Complete satisfaction assured by the nation-wide Midland distributor and service organization

Write to us today for complete information.

THE MIDLAND STEEL PRODUCTS CO.
6660 MT. ELLIOTT AVENUE • DETROIT 11, MICH.
Export Department: 38 Pearl Street, New York, N. Y.

MIDLAND POWER BRAKES

CCJ NEWSCAST

OVERTIME PAY STUDIED

Enforcement of a new interpretation under the Fair Labor Standards Act regarding certain types of premium payment, necessitated by the recent Supreme Court decision in the longshore cases, will not go into effect until September 15, 1948. Previously enforcement had been scheduled to begin July 1.

This was announced by Wm. R. McComb, Administrator of the Wage and Hour and Public Contracts Division, U. S. Department of Labor. In ordering the postponement, Mr. McComb said that information from both labor and management sources indicated that more time is required to make appropriate adjustments, or where necessary, to make revisions in collective bargaining agreements, due to varying requirements of union agreements as to reopening of contracts.

DRIVE-AWAY RULES REVISED

The ICC has modified its former findings with regard to its safety regulations governing the transportation of motor vehicles by the drive-away method to permit (1) the drive-away transportation of used automobiles or other used motor vehicles weighing not more than 5,000 lb by means of a towbar attached to their bumpers, and (2) the double and full saddle-mount method of drive-away operation.

DENVER GETS ROADEO FINALS

Arrangements have been completed to hold the finals in the truck and full trailer class of the National Truck Roadeo at Denver, September 24 and 25.

Announcement had been made previously that finals in the straight truck and the tractor-semitrailer classes will be held at Washington, D. C., in conjunction with ATA's annual convention, October 8 to 13.

STEEL INDUSTRY ABANDONS BASING POINT PRICING

The U. S. Steel Corp., Bethlehem Steel and Armco have abandoned the basing point system of pricing in favor of an f.o.b. mill price plus actual freight.

Opinion expressed by lawyers and economists, at a recent luncheon sponsored by the U. S. Chamber of Commerce, was that the immediate effect would be a net increase in steel cost for industry generally. Granted some fabricators located near steel mills may benefit, but for the majority costs will increase. The basing point system had tended to stabilize prices; retard increases in time of lush demand as now; and, support prices in depression times.

Dates & Doings

SEPT. 2-4—New Mexico Motor Carriers Assn. Truck Roadeo and 10th Annual Convention, Hilton Hotel, Albuquerque, N. M.
SEPT. 6-8—Mississippi Transort Assn. Convention, Buena Vista Hotel, BiloXi, Miss.
SEPT. 10-11—North Carolina Motor Carrier Assn. Annual Convention, Mayview Manor, Blowing Rock, N. C.
SEPT. 10-11—Virginia Highway Users Assn. 18th Annual Convention, The Chamberlain, Old Point Comfort, Va.
SEPT. 10-12—Kansas Motor Carriers Assn. 14th Annual Convention, Allis Hotel, Wichita, Kan.
SEPT. 13-14—Wisconsin Motor Carriers Assn. Annual Convention, Lake Lawn Resort, Lake Delavan, Wis.
SEPT. 13-17—Fleet Supervisor Training Course, Penn State College, Penn State, Pa.
SEPT. 13-17—Tennessee Motor Transport Assn. Annual Convention, Andrew Jackson Hotel, Nashville, Tenn.
SEPT. 17-18—Michigan Trucking Assn. Convention, Park Place Hotel, Traverse City, Mich.
SEPT. 17-18—Pennsylvania Motor Truck Assn. Fall Meeting, Bedford Springs Hotel, Bedford, Pa.
SEPT. 17-18—West Virginia Motor Truck Assn. Convention, Daniel Boone Hotel, Charleston, West Virginia.
SEPT. 27-OCT. 1—Fleet Supervisor Training Course, Ohio State University, Columbus, Ohio.
SEPT. 28—Motor Transport Assn. of Connecticut Annual Convention, Hotel Bond, Hartford, Conn.
SEPT. 30-OCT. 1—Florida Trucking Assn. Annual Convention, Tampa Terrace Hotel, Tampa, Florida.
OCT. 4-8—Fleet Supervisor Training Course, Purdue University, LaFayette, Indiana.
OCT. 5-7—Chevrolet Truck and Special Equipment Show, Industrial Bldg., State Fair Park, Milwaukee, Wis.
OCT. 7—Massachusetts Motor Truck Assn. Annual Convention, Statler Hotel, Boston, Mass.
OCT. 25-29—Fleet Supervisor Training Course, New York University, New York City, N. Y.
NOV. 3-5—American Society of Body Engineers Annual Convention, Rackham Memorial Bldg., Detroit, Mich.
NOV. 4-5—Arkansas Bus and Truck Assn. Convention, Marion Hotel, Little Rock, Ark.
NOV. 8-12—Fleet Supervisor Training Course, Georgia School of Technology, Atlanta, Ga.
NOV. 12-13—Associated Motor Carriers of Oklahoma Annual Convention, Skirvin Tower Hotel, Oklahoma City, Okla.
NOV. 13—New Hampshire Truck Owners Assn. Annual Convention, Manchester, N. H.
NOV. 15-19—Fleet Supervisor Training Course, University of Florida, Gainesville, Fla.
DEC. 2-4—Oregon Motor Transport Assn. Convention, Multnomah Hotel, Portland, Ore.
DEC. 6—Missouri Bus and Truck Assn. Convention, Hotel Governor, Jefferson City, Mo.
DEC. 9-11—Montana Motor Transport Assn. Convention, Northern Hotel, Billings, Mont.
1949
JAN. 27-28—National Council of Private Motor Truck Owners Annual Meeting, Claypool Hotel, Indianapolis, Ind.
MARCH 28-30—Society of Automotive Engineers National Transportation Meeting, Statler Hotel, Cleveland, Ohio.

GEO. H. HAMMOND, recently elected president and general manager of Federal Motor Truck Co., succeeding T. R. Lippard, who retired.

ADVANCED FLEET SEMINAR AT NEW YORK UNIVERSITY

The "First Annual Seminar in Problems and Policies of Motor Vehicle Fleet Management and Safety Supervision" will be conducted by the Center of Safety Education, New York University November 15 to 19. This will be an advanced course for fleet supervisors and will be programmed in cooperation with National State and local safety and transportation agencies.

The Center for Safety Education is a member of the National Committee for Motor Vehicle Fleet Supervisor Training and has conducted 17 basic courses for fleet supervisors since 1938. The advanced Seminar is designed to meet the newly felt need for additional training in terms of problems and policies related to both economical and safe motor vehicle fleet operation. The program will feature discussion sessions, problem-solving panels and brief lecture treatment of pertinent topics on an advanced level.

Enrollment is open to fleet owners, insurance company safety engineers, fleet supervisors and safety engineers, personnel directors and others directly connected with safety and conservation. Class size is limited and enrollment preference will be given to those who have basic courses either at New York University or in any of the 30 states where such courses are conducted. Tuition fee will be $20. and further details may be secured from M. D. Kramer, assistant director, Center for Safety Education, New York University, 8 Fifth Ave., New York, N. Y.

CENTRAL STATES RATES UP

General class and commodity rate increases of about 9 per cent became effective recently, when the Interstate Commerce Commission lifted suspensions of certain tariff schedules of the Central States Motor Freight Bureau.

PLAN AIDS SHIPPING

A subcommittee of the American Trucking Associations' Small Shipments Committee has tentatively approved a plan for handling shipments of less than 300 lb that would expedite the movement of such freight and, at the same time, result in savings to both carriers and shippers.

Discarding suggestions for using baggage tags, coupons, stamp systems and similar ideas, the subcommittee proposed a combined document, similar to the abbreviated bill-of-lading form, which would be made

(TURN TO PAGE 114, PLEASE)

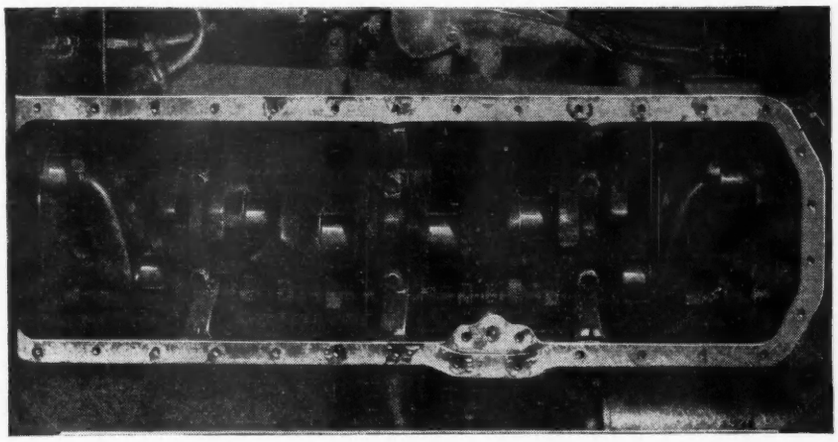
STANDARD ENGINEER'S REPORT

RPM CALOL

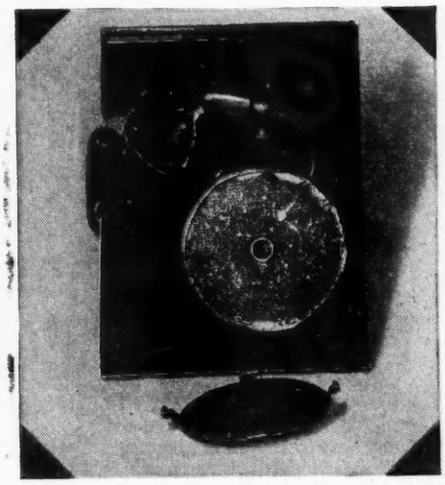
TEST DATA

UNIT	8 cyl. High Compression Bus Engine
LUBRICANT	RPM Heavy Duty Motor Oil SAE 30
MILES RUN	90,371
CONDITIONS	Highway Operation - Below freezing to desert heat
FIRM	Moyers Stages
LOCATION	Fresno, Calif.

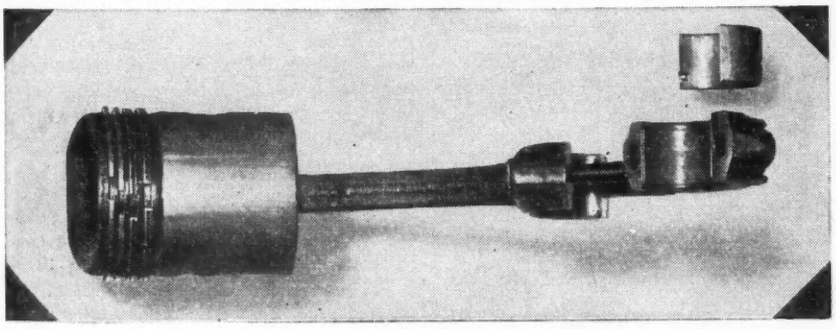
GASOLINE BUS ENGINE RUNS 90,371 MILES IN CLIMATIC EXTREMES WITHOUT SLUDGE OR CARBON TROUBLE



This bus engine was torn down after operating in regular highway service for 90,371 miles on RPM Heavy Duty Motor Oil ... average speed, 50 M.P.H. with many starts and stops. Inland valley weather conditions - below freezing in winter to more than 100° F. above zero in the shade in summer. As the photograph shows, the inside of the engine was exceptionally clean. RPM Heavy Duty Motor Oil's special detergent compounding keeps all engine parts cleaner.



The oil-pump screen was clear and no deposits had accumulated in the crankcase pan. With RPM Heavy Duty Motor Oil, any lacquer, carbon, sludge or other foreign matter is dispersed in the oil and flows out when the crankcase is drained.



All rings were free and bearings in good condition as indicated by this piston and connecting rod from the engine. RPM Heavy Duty Motor Oil loosens and removes lacquer and carbon from around rings -- keeps oil return holes open and deposits from building up in grooves. It is not corrosive to any bearing metal.

REMARKS: RPM Heavy Duty Motor Oil SAE 30 was in this engine from the time the engine was new and first put in service. The crankcase was drained at regular intervals. Special compounds in RPM Heavy Duty Motor Oil give it the ability to keep engines clean, adhere to both hot and cold spots in engines, resist oxidation, prevent corrosion and foaming.

STANDARD TECHNICAL SERVICE conducted and reported this test: If you have a lubrication or fuel problem, your Standard Fuel and Lubricant Engineer or Representative will give you expert help; or write Standard of California, 225 Bush Street, San Francisco 20.

STANDARD OF CALIFORNIA • San Francisco, Calif. STANDARD OIL COMPANY OF TEXAS • El Paso, Texas
THE CALIFORNIA COMPANY • Denver, Colo. THE CALIFORNIA OIL COMPANY • New York

CCJ Newscast

(CONTINUED FROM PAGE 112)

out by the shipper. The shipper would handle billing and rating, thus eliminating many costly steps now handled by motor carriers. The carrier's sole duty would be to transport the freight.

Under the proposal, shipments would be prepaid by the shipper, either in cash or through establishment of credit with the carrier. It also was proposed to arrange for a uniform document which could be bought in large quantities under a cooperative arrangement, thereby saving on the cost of printing.

1948 Domestic Motor Truck Factory Sales by Gross Vehicle Weight*

	5,000 & Less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	Over 26,000	Total
January	28,690	15,458	11,641	17,685	5,615	3,166	1,638	83,893
February	32,776	15,623	12,308	16,733	5,983	3,686	1,800	88,889
March	44,110	21,222	15,890	24,237	6,708	4,437	1,968	118,572
April	43,441	20,671	13,910	21,163	6,667	4,039	2,020	111,911
May	37,114	17,132	13,898	18,386	4,734	4,018	1,627	96,909
June	37,244	19,741	13,503	18,794	6,310	4,371	1,792	101,755
Total—6 Months	223,375	109,847	81,150	116,998	36,017	23,697	10,845	601,929

*Automobile Manufacturers Association.

1948 Truck Trailer Production*

Vans:	May	April	Five Months
Insulated and refrigerated	164	244	902
Furniture	82	21	172
All other closed top	1,498	1,621	7,350
Open top	142	195	868
Total Vans	1,886	2,081	9,292
Platforms:			
With cattle and stake racks	124	107	607
With grain bodies	41	33	201
All other	400	419	2,007
Total Platforms	565	559	2,815
Tanks:			
Petroleum	179	254	1,477
All other	9	39	187
Total Tanks	188	293	1,664
Pole and Logging:			
Single Axle	284	288	1,100
Tandem Axle	194	208	763
Total	478	496	1,863
Low-bed heavy haulers	163	169	781
Off-highway	84	102	362
Dump trailers	82	52	215
All other trailers	160	146	1,303
Total Complete Trailers	3,606	3,898	18,295
Trailer Chassis	147	218	911
Total Trailers and Chassis	3,753	4,116	19,206

*Industry Division, Bureau of the Census.

MAY TRUCKLOADINGS DECREASE

The volume of freight transported by motor carriers in May decreased 2.1 per cent below April but increased 11.3 per cent over May, 1947, according to statistics compiled by the Department of Research, American Trucking Associations, Inc.

Comparable reports received by ATA from 307 carriers in 42 states showed these carriers transported an aggregate of 2,742,206 tons in May, as against 2,800,724 tons in April and 2,464,159 tons in May, 1947.

The ATA index figure, computed on the basis of the average monthly tonnage of the reporting carriers for the three-year period of 1938-1940 as representing 100, was 220.

Approximately 80 per cent of all tonnage transported in the month was hauled by carriers of general freight. The volume in this category decreased 2.2 per cent below April, but increased 10.6 per cent over May, 1947.

Transportation of petroleum products, accounting for about 11 per cent of the total tonnage reported, showed a decrease of 3.5 per cent below April but increased 15.5 per cent over May, 1947.

(TURN TO PAGE 234, PLEASE)

DESTINATION...

...lower operating costs

Cuts operating costs
Speeds delivery

...WITH HOOBLER UNDERCARRIAGE

YOU can haul loads of steel or fragile crates of eggs *safer* with a Hoobler-equipped trailer. There's minimum load shifting, because flexible, multiple support absorbs practically all road bumps.

With the Hoobler Undercarriage, the trailer eases around corners, resulting in minimum tire scuffing—*takes tight turns in a radius less than its length.* There's no "weaving" on straightaways.

The Hoobler Undercarriage is simple in design and construction, quickly inspected or serviced. It is designed for use with standard brakes, axles, wheels and tires.

Vans, high-sides, tankers and flat-tops (28 feet and over) are now using this self-steering undercarriage with complete satisfaction and at lower operating cost per ton-mile.

A letter will bring complete information—tell you how the Hoobler Undercarriage can help your jobs roll easier, safer, at lower cost. Write The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL

DESIGNERS AND PRODUCERS OF STEEL PRODUCTS SINCE 1906

Builder of The Hoobler Undercarriage

. . . E. A. ZEITNER, recently appointed branch manager at Madison, Wis.

. . . LOUIS F. MASTRIANI, as sales manager of Charles Rein & Co., Inc., New York, N. Y.

. . . EDGAR STANTON, JR., as advertising manager of the Belden Mfg. Co., Chicago.

. . . J. R. SCOTT, appointed International Harvester branch manager at Grand Island, Nebr., replacing C. R. Russell, who was retired.

. . . L. E. RYKKEN, recently appointed branch manager at Watertown, S. D.

. . . A. L. HAWK, as assistant to the western district manager in Chicago and R. B. Hazard, as manager of distributor sales, western district, announced by Raybestos-Manhattan, Inc., Manhattan Rubber Division, Passaic, N. J.

. . . ROBERT L. WEIR, succeeding Harris Popplewell as head of the Canadian subsidiary, The General Detroit Corp., Canada, Ltd.

. . . W. G. HANCOCK, as President of the McCord Corp.

. . . CHARLES V. DEVENDORF, appointed service parts manager Federal Motor Truck Co.

. . . GEORGE AWTREY, appointed field service manager.

. . . SAM I. BEAGLE, the district representative in Western Missouri and the State of Kansas, with headquarters in Kansas City, Mo., for United States Asbestos Division of Raybestos-Manhattan, Inc.

. . . E. B. HARRIS appointed district representative for metropolitan Chicago and vicinity.

. . . FREDERICK R. MAULSBY, general superintendent of motor vehicle equipment, Railway Express Agency, who has retired after 21 years of service.

. . . FRANK COUSAR, appointed general superintendent of motor vehicle equipment, Railway Express Agency, with headquarters at New York City.

. . . RUSSSELL B. HAMMOND, formerly zone truck manager for Chevrolet at Norwood, O., appointed sales manager of the Hercules Body Sales Co.

. . . ROBERT SCHOONOVER, as advertising manager of Toledo Steel Products Co.

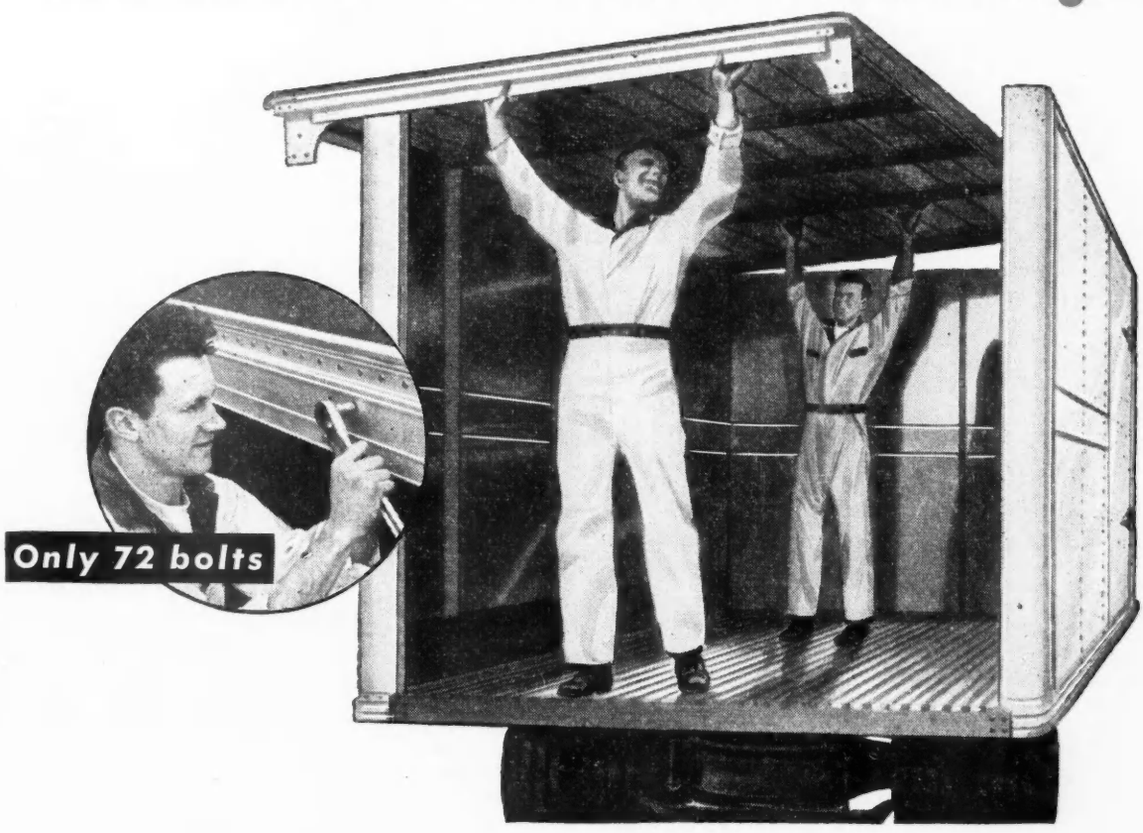
. . . A. J. WEIGAND, as fleet sales engineer, Perfect Circle Corp.

. . . WILLIAM E. FITZGERALD named to fill the newly created post of truck sales promotion manager, The Studebaker Corp.

(TURN TO PAGE 118, PLEASE)

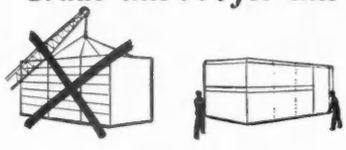
NOW BROWN GIVES YOU AN EVEN BIGGER PROFIT OPPORTUNITY

with the new "TIME-SAVER" Brown Cargo Van



If you have a screw driver and a socket wrench You can build these bodies

Trade this . . . for this



Two Men Can Lift It!

The new CV Brown Cargo Van is extremely light in weight. Actually 2 men can lift it — 4 can carry it easily. No cranes are needed.

Here is something new and something big for you. This revolutionary new Brown Aluminum Cargo Van offers you an opportunity to really get in the profit picture. With its amazing new assembly principle you can assemble and mount a body in minutes instead of hours. That means *less* time for building — *more* time for selling, *bigger* profits for you.

The new Brown Cargo Van is shipped in ready to assemble sections. Corner-posts, longerons, stiffeners and brackets are already riveted into place. The extrusions are designed so the entire assembly nests together and is self-aligning — no jig is necessary. There are only 72 bolts to set to assemble this body.

For full information on the new CV Cargo Van see your nearest Brown Industries representative or write us:

Brown ALUMINUM TRAILERS

Brown Trailer Company
Chicago 8, Illinois

Brown Industries
Spokane 1, Washington

HERE IS ALL YOU DO TO ASSEMBLE A BROWN CARGO VAN

Introducing

(CONTINUED FROM PAGE 116)

. . . EVANS A. NASH, president, Yellow Transit Co., Oklahoma City, reappointed as chairman of the Chamber of Commerce Transportation and Communication Committee for the year 1948-1949.

. . . WILLIAM H. KNEASS, appointed central divisional manager of U. S. Tires division of United States Rubber Co., with headquarters at Chicago. He succeeds Dwight B. Eldred who has been named assistant sales manager for the division and who has been transferred to the company's New York headquarters.

. . . DWIGHT B. ELDRED, named assistant sales manager of U. S. Tires division of United States Rubber Co.

. . . HOWARD J. BEGIN, as advertising manager of Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio.

. . . WILLIAM R. RINELLI, appointed director of Ansul Chemical Co.'s new Customer Relations Department.

. . . CHARLES PRESTIN, appointed truck representative of Ford's New York District.

. . . EDWARD JANICKE, has been made a fleet sales representative, and Quentin G. Pletsch, has been appointed a fleet service representative.

. . . JOHN C. HINES, as sales manager of AC Spark Plug Co.

. . . DEAN L. O'HOLLAREN, as sales supervisor for "No. 7" line of automobile and household products in a district extending from Chicago to Denver, E. I. du Pont de Nemours & Co., Wilmington 98, Del.

. . . B. F. LYONS named a supervisor in the Midwest Division, The Electric Auto-Lite Co. Territory representatives: L. D. HOBBIE, Eastern Division; R. L. WEIDNER, Midwest Division; D. L. SADLER and C. M. CRAMER, Central Division; H. D. HARRISON, H. J. ANCELOT and M. N. COLLINS, Southern Division.

. . . CHARLES POPPER, appointed service manager of the Auto-Lite Battery Corp., Toledo.

. . . GEORGE W. DAVIES, as general sales manager of Sealed Power Corp.

. . . THOMAS G. TYNAN succeeding Harry W. Beedle as manager Boston Branch, The Electric Storage Battery Co.

. . . HERBERT H. WARREN, appointed assistant manager, New York Branch of The Electric Storage Battery Co.

. . . WALTER HOLLAND, as regional representative of the National Highway Users Conference for the states of Kansas, Missouri, Oklahoma, Arkansas and Texas.

. . . E. T. ANDERSON, appointed supervisor of the special equipment department of the truck division, Dodge Division, Chrysler Corp.

IHC REVISES FIELD TITLES

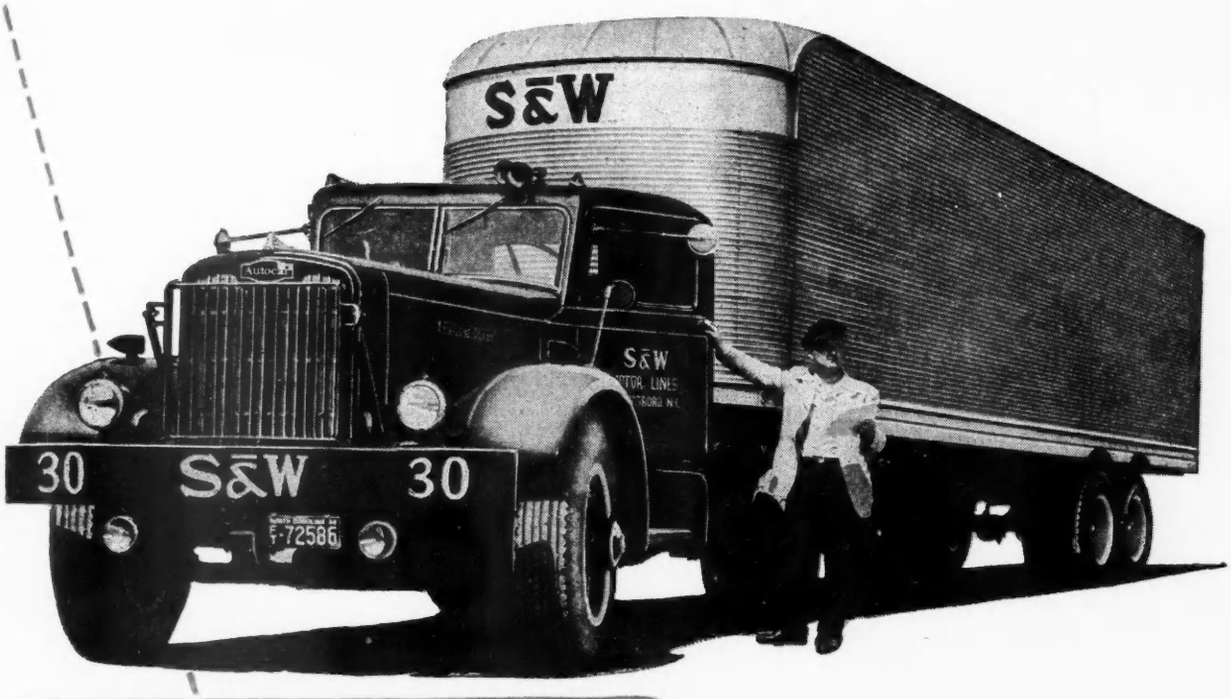
A change in the system of titles applying to the motor truck and farm equipment field sales executives of the International Harvester Co. has been announced by John L. McCaffrey, president. The following designations have been selected to become a part of the Company language:

1. The present area designation "Block" will be dropped from use and the term "Zone" be adopted. The position title "Zone Manager" will be substituted for the term "Blockman". By the same token, the present "Block Collector" will be known as "Zone Collector".

2. The present area and office designation "Branch" will be changed to "District". All related position titles presently using the term "Branch" in their position title, such as branch manager, assistant branch manager, branch credit manager, will substitute "District" in place of "Branch".

3. The designations "Subbranch" and "Retail Account" will be changed to "Branch". The individual in charge will carry the title of "Branch Manager".

4. The present position title "Branch Service Manager" will be changed to "District Service Supervisor".



"100% Equipped with WORLD BESTOS Brake Blocks"

"Tested and Approved in All Kinds of Going"

● S. & W. Motor Lines of Greensboro, North Carolina operates 28 tractor-trailer units, eight of which are tandems, over a wide variety of routes in the South. In line with the trend in every part of the country, this operator has standardized on WORLD BESTOS Blocks for best results in heavy-duty braking service.

"We are 100% equipped with WORLD BESTOS Brake Blocks," writes Mr. G. H. Sharpe, owner of S. & W. Motor Lines. "For over two years they have been tested and approved in all kinds of going. Results show that with your 'E' Compound we get top braking efficiency with worthwhile cost-per-mile savings."

These Blocks afford such performance because they are of an extremely tough fibrous mix made to withstand high temperatures usually disastrous to ordinary linings. Face and body are composed of independent compounds in the WORLD BESTOS Balanced Crystal Structure. This makes a lining which wears very slowly in even the most severe service and provides a stable, resilient friction under all operating heats and pressures.

For proof, reline with a set of WORLD BESTOS Brake Blocks and compare them to those you now use.

BRAKE LININGS
BRAKE BLOCKS

WB **WORLD BESTOS CORP.**

6595

NEW CASTLE • INDIANA

New Products

(CONTINUED FROM PAGE 59)

is inserted in the crankshaft oilway. The specially-designed head, contacting the bearing parting face on the side opposite the locking lip, rolls the bearing out when the shaft is rotated. The new upper main bearing is installed by reversing the above procedure.

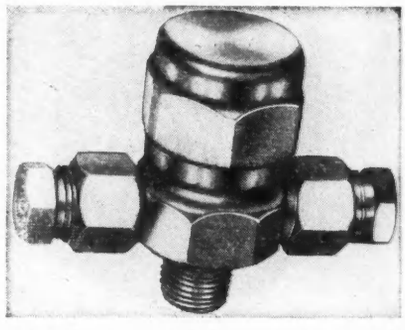
The tool is merchandised in two sizes, for oil holes of 3/16-in. and 1/4-in. diameters. These two pins cover the range of oilway sizes as used in almost all popular engine models.

Use Free Postcard for More Details.

P221. Lubricator Valve

A new lubricator valve that delivers a positive metered amount of oil or grease to each bearing in lubricating systems has just been announced by Titeflex, Inc., Newark, N. J.

Known as the Grannan Lubricator, it dispenses all lubricants from light oil to heavy greases through the same valve without alteration. It is a fully hydraulic, through flow valve, with no pockets or crevices to retard lubrication. The valve is completely inclosed to prevent leakage and to eliminate possibility of contamination to the lubricant from outside sources.



The Grannan Lubricator is installed directly into the bearing. It does not require special guns to introduce lubricant to system. The lubricator will function either with hand operated guns or from a completely automatic system set to operate at any desired interval. Operating temperature is from zero to 300 deg F.

Use Free Postcard for More Details.

P222. Battery Servicer

The "Airpres," designed by Geerpress Wringer, Inc., Muskegon, Mich., is a device designed to speed the servicing of automobile batteries. It transfers distilled water from the container to the battery without spilling. A container of distilled water is placed alongside the vehicle, the bulb of the "Airpres" is squeezed, and a stream of water passes through the delivery tube to the battery cell.

The tapered "plug" of the "Airpres" is

(TURN TO PAGE 123, PLEASE)

New Products

(CONTINUED FROM PAGE 120)

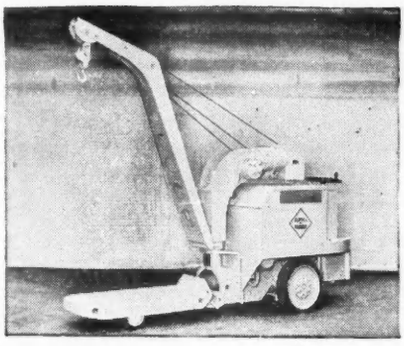
designed to fit the opening of any standard can, distilled water jug or carboy. A removable filter serves as double insurance to remove any foreign matter which may have gotten into the water. When not in use, the open end of the delivery tube is inserted into a recess in the plug to prevent contamination of the distilled water.

Use Free Postcard for More Details.

P222. Power Truck

A new power industrial truck combining a low-lift platform and a crane is announced by Elwell-Parker Electric Co., Cleveland, Ohio. This combination is effective for many load-handling operations in manufacturing, warehousing and shipping.

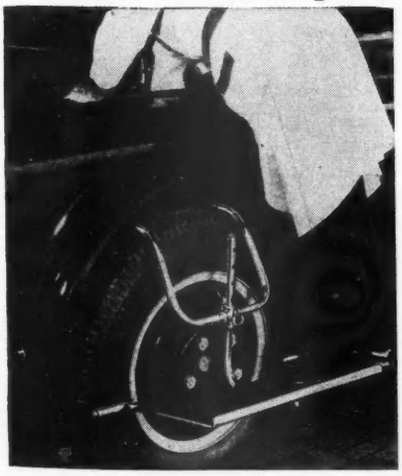
The crane can pick up a load from floor level and lift it to a hook height of 8 ft, within a radius of 45 deg either left or right from base. Its shape and mechanism provide means for reaching, high-stacking or taking down raw materials or finished products in such form or package that may be handled with rope or cable slings.



The truck's platform can lift and transport loads weighing up to 3 to 5 tons, depending on size and model. Loads may be piled directly on truck's platform or on skids under which the platform can maneuver after loading.

Use Free Postcard for More Details.

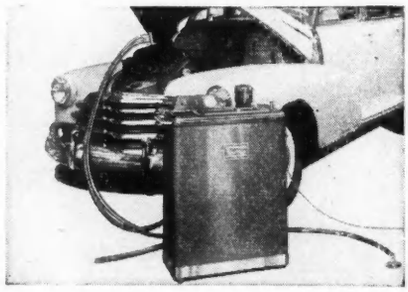
Truck Wheel Step



The adjustable wheel step made by Miller Mfg. Co., Detroit, provides a wide, strong working platform for the heaviest mechanic. Clamping to fit all sizes of truck tires, the step saves scratched fenders and speeds work, according to the company.

P223. Radiator Flusher

Thoro-Flush, a new streamlined cooling system flusher, has been developed by Everman Products, Inc., Bloomington, Ind.



The flusher consists of a new pump unit with special chemical cleaning agent for loosening and flushing of rust, scale and deposits from inner surfaces of radiator tubes, water jacket and hot-water heater.

Use Free Postcard for More Details.

END

(Please resume your reading on P. 60)

Road Truck Driver: "We want a baby and we want a new car. Since we can't afford both we'll have to decide on one or the other."

Wife: "Let's have a baby—we can get it quicker."

Hydraulic Shop Equipment

(CONTINUED FROM PAGE 53)

the type of power cylinder assembly to operate the hoist most efficiently, and the type of controls may be selected.

There are several types available from a long list of manufacturers. For lubrication of light vehicles the drive on lift has several advantages. This hoist is simple, safe and easy to use. It can be obtained in several sizes to suit wheelbases and weights, and with the operator's choice of power cylinder and controls.

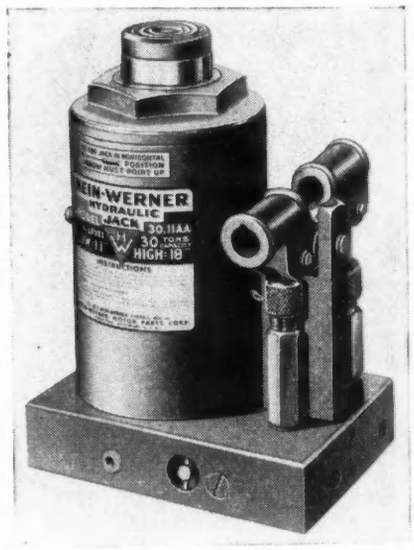
For service work many companies recommend the single post free wheel lift. This is safe, substantial and strong and can be used for quick service, wheel and tire work, underchassis lubrication and in other instances where it is desired to keep the wheels free. With a single post lift vehicles can be driven on from any angle.

For unobstructed accessibility the twin post lift is ideal. Advantages claimed for this type are low installation cost, low operating and maintenance costs, a unit enabling quick spotting, jacking, raising and lowering with a minimum of effort.

One make features a twin post available in three sizes and 7 models. They are adjustable to any wheelbase due to the fact that either post will move independently of the other. This type is said to give maximum accessibility to undercarriage.

A triple post type is designed for servicing combined tractor-trailer units. In this instance a stationary third post is added to the twin post so that the vehicle is positioned with tractor rear wheels over the stationary post, with the outside supports positioned to suit wheelbase.

It is imperative that the fleetman select the size lift required for his work. Heavy-duty installations are desired in most cases since they will accommodate all types of vehicles. In this respect the saddle post and short rail should be seriously considered due to the fact that it will handle all wheelbases and weights for every design. With this lift the vehicle can be quickly spotted in a lifting position for inspection, lubrication or maintenance.

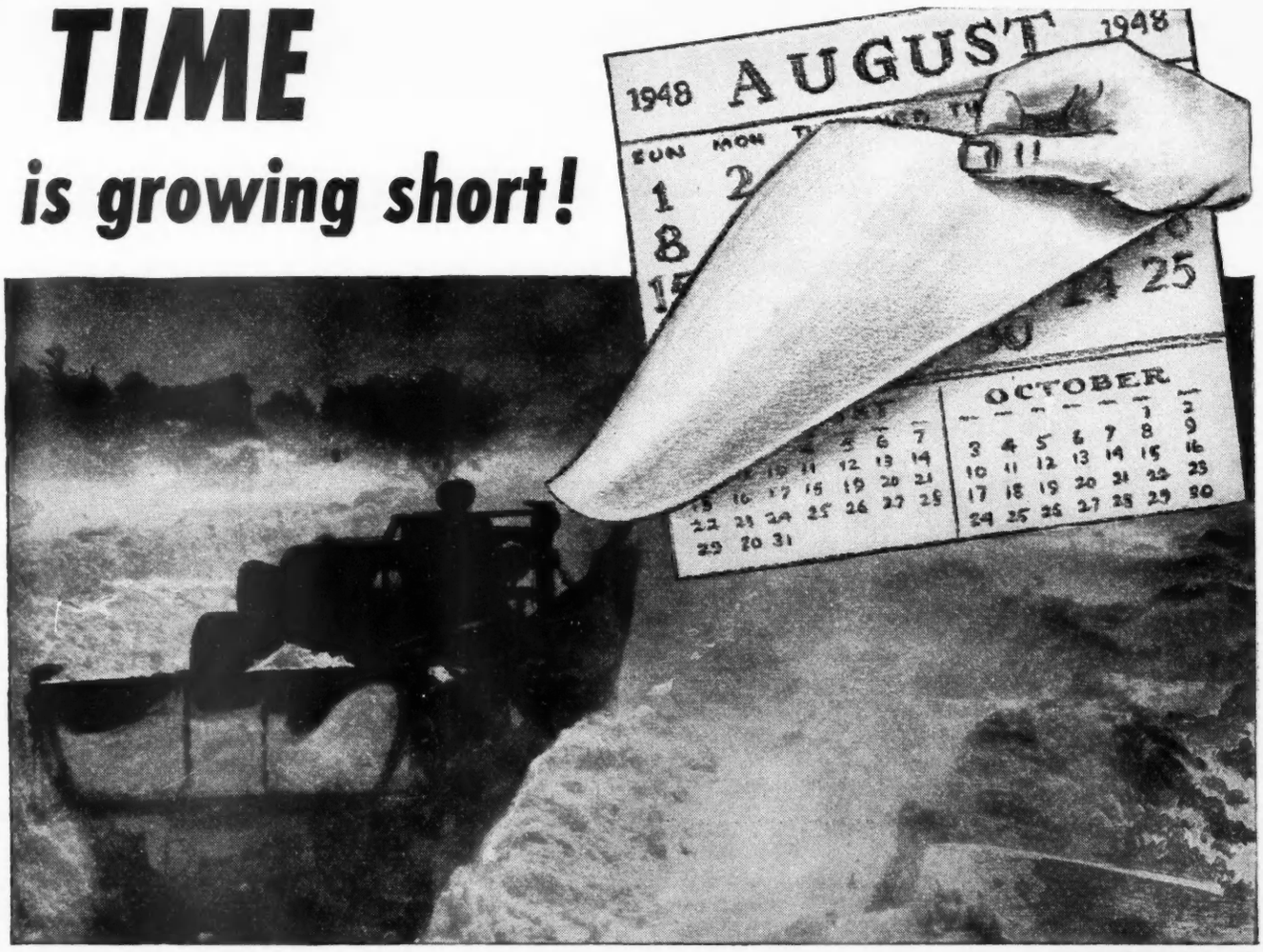


The Hein-Werner 30-ton hydraulic jack for shop or roadside truck lifting

This installation will also serve as a single end lift. The long post may be used for cars and light trucks, while the saddle post can be used for quick access to rear axle, gas tank, front end, etc.

(TURN TO PAGE 126, PLEASE)

TIME
is growing short!

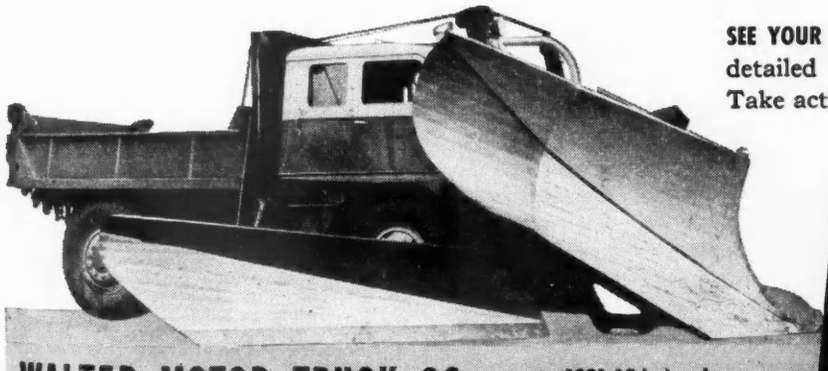


Order your WALTER SNOW FIGHTERS NOW!

Early snow? Late snow? Why gamble! If you intend buying new Walter Snow Fighters —PLACE YOUR ORDERS NOW! The earlier the order, the sooner the delivery.

This suggestion is made without thought of "high pressure" . . . but in an effort to schedule production and deliveries so that the maximum number of communities may share in the output of Walter Snow Fighters.

There are Walter Snow Fighters to meet any snow conditions—models from 150 to 250 h.p., gasoline or diesel—with wide choice of correctly designed plows and special equipment to meet your particular needs. All models feature the famous Walter 4-Point Positive Drive, which provides non-slip traction, tremendous power and high speed clearance.



SEE YOUR WALTER DISTRIBUTOR or write us for detailed literature on available models. Take action now!

WALTER MOTOR TRUCK CO. 1001-19 Irving Ave. Ridgewood 27, Queens, L. I., N. Y.

WALTER SNOW FIGHTERS

Hydraulic Shop Equipment

(CONTINUED FROM PAGE 124)

It is claimed the use of lifts reduces time per operation as much as 30 per cent. Many prefer this installation over the pits because of the fact they are safer, offer unobstructed floor space when lowered and are easier to keep clean.

Hydraulic Presses

HYDRAULIC presses are available in sizes and models to suit every shop need. While the 60 and 80-ton presses are adapted for use where extremely heavy pressures are required, work of moderate pressure can be done faster and easier on this machine.

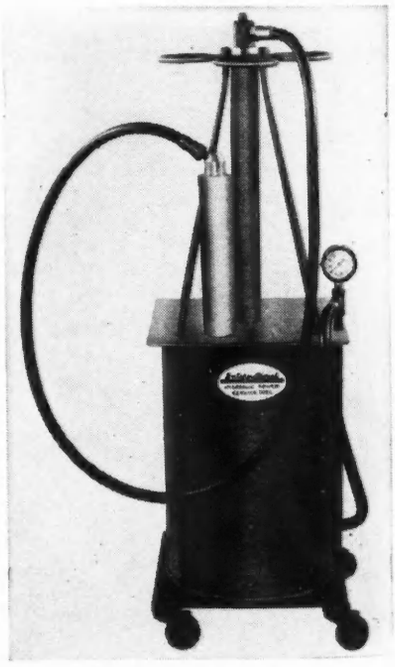
Some presses are air-operated, with an air pump that develops a smooth, steady ram speed which is excellent for riveting, broaching and special types of press work. It is claimed that an air control mechanism provides for smoother operation, as convenient as the mechanically operated. Such an installation can be made from the shop's air line without much modification.

All makes have a convenient pressure gage, a depth gage, table adjustment, and hand levers for insuring accuracy and precision. Most of these features can be found on the 40, 25-ton presses designed for the shop doing lighter work.

Ten-ton bench arbor presses are indispensable to every shop. While the floor press will do most of the jobs, the light press is sometimes more convenient and portable. The 10-ton arbor press is recommended for starter-generator work, to remove pulleys, gears, expand the pole shoe pieces, extract pole shoe screws and straighten shafts. In addition it is handy for general purpose shop work where light pressure is sufficient.

Hydraulic Jacks

NO shop is complete without an assortment of hydraulic jacks. Widely varying service requirements demand lifting tools designed specifically for the job. The fleetman should give thought to the number of

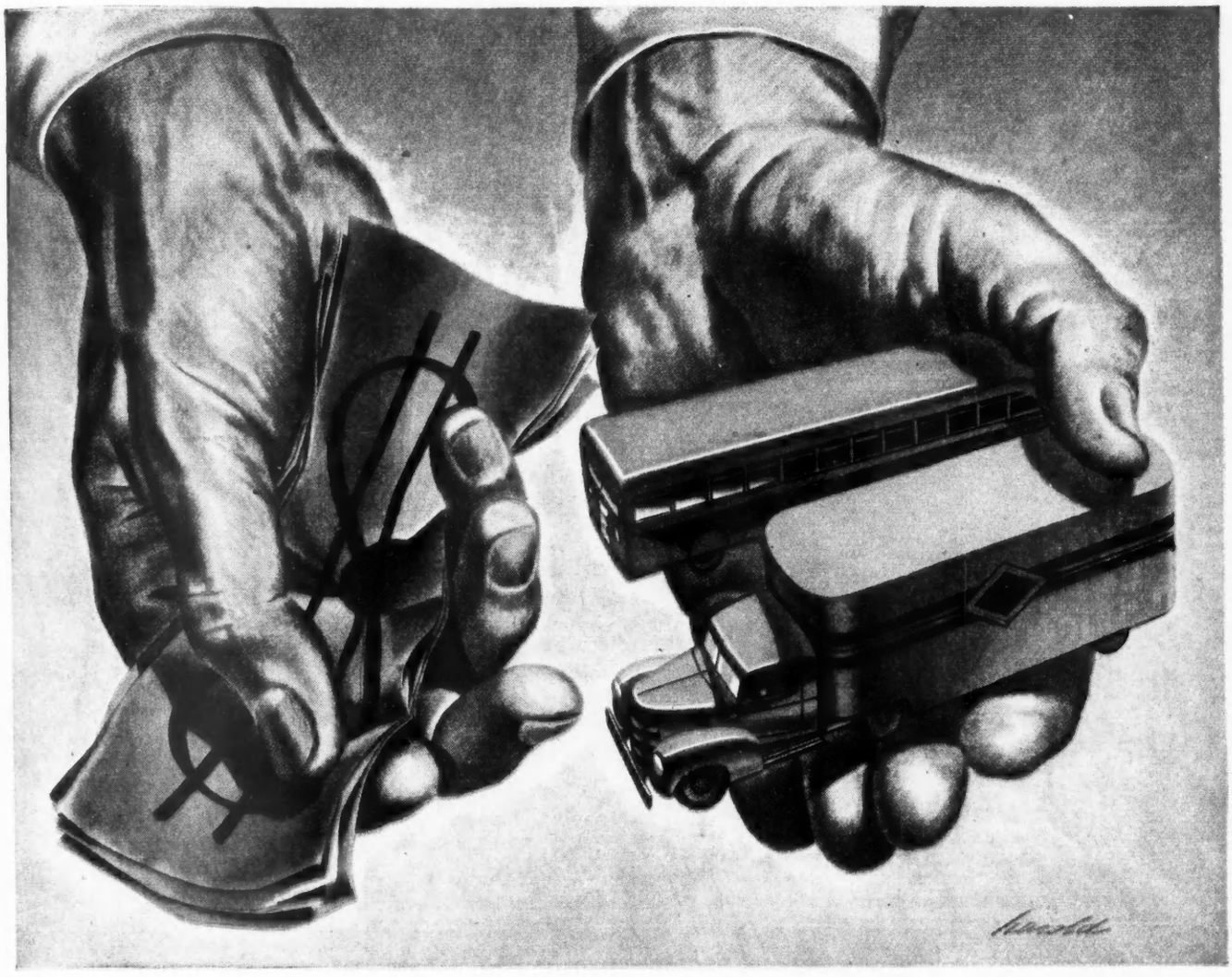


The International Tool hydraulic power unit for cylinder sleeve and shackle work

such units required in this shop. If a mechanic must walk to the far end of the shop to pick up a jack—or

(TURN TO PAGE 128, PLEASE)

New truck and bus costs your problem?



Quaker State HD Oil can help!

WORN equipment. New equipment scarce and high. Heavier replacement outlay. Is that your trouble?

Smart financing can solve it by spreading over a longer period. Yes, but the new equipment will have to last that longer period.

That's where Quaker State HD Oil can help. Quaker State HD Oil gives engines longer life by (a) providing better lubrication longer; and (b) by helping to keep engines cleaner, free from trouble-making sludge, gum and sticky "varnish."

Skillfully refined from 100% pure Pennsylvania grade crude oil, it helps you keep equipment earning power *up*—service expense *down*. Whether your equipment is new or old, Quaker State HD Oil can save trouble, help you make more money.

QUAKER STATE
HD OIL
AND SUPERFINE LUBRICANTS

Use Quaker State HD Oil for trucks, buses, taxis, tractors.
Use Quaker State Motor Oil for passenger cars.

QUAKER STATE OIL REFINING CORPORATION • OIL CITY, PENNSYLVANIA

Hydraulic Shop Equipment

(CONTINUED FROM PAGE 126)

if he must wait a few minutes for another to finish with one, the price of another jack is soon spent. Worn-out jacks, inadequate equipment or out-moded pieces are a menace to the safety and efficiency of the shop.

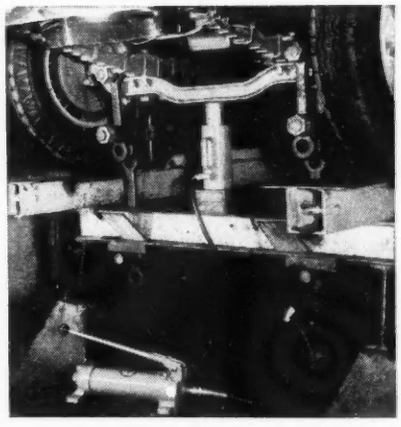
Efficient maintenance requires a roller type of jack with sufficient handle and chassis length to permit easy placement under either front or rear of the vehicle. It should have sufficient capacity to raise easily, quickly and safely. And it should provide ample clearance for efficient working conditions.

A good road service jack must be compact, light in weight and portable. It should have sufficient capacity to handle a wide range of vehicles; it must have a satisfactory lifting range to offset varying road conditions.

Hydraulic transmission jacks will speed the work and enable the mechanic to line up the units with little effort. Some transmission jacks are operated by a remote control unit, either foot or hand-controlled, so that unit can be raised and positioned with a minimum of effort.

Lube jacks should be a part of every hoist. These hydraulic units take the weight off the springs and gently rock the vehicle during the lubrication. In addition to aiding in the location of squeaks and rattles, they will spread the springs so they can be better lubricated. This installation will aid in opening up frozen shackles, enabling the lubricant to penetrate the points of greatest wear.

For shops equipped with pits, the portable pit hoist may be required. This unit is handy for wheeling under front or rear ends of trucks for removal or replacement of under-floor equipment. It is compact, built for heavy handling in narrow quarters.



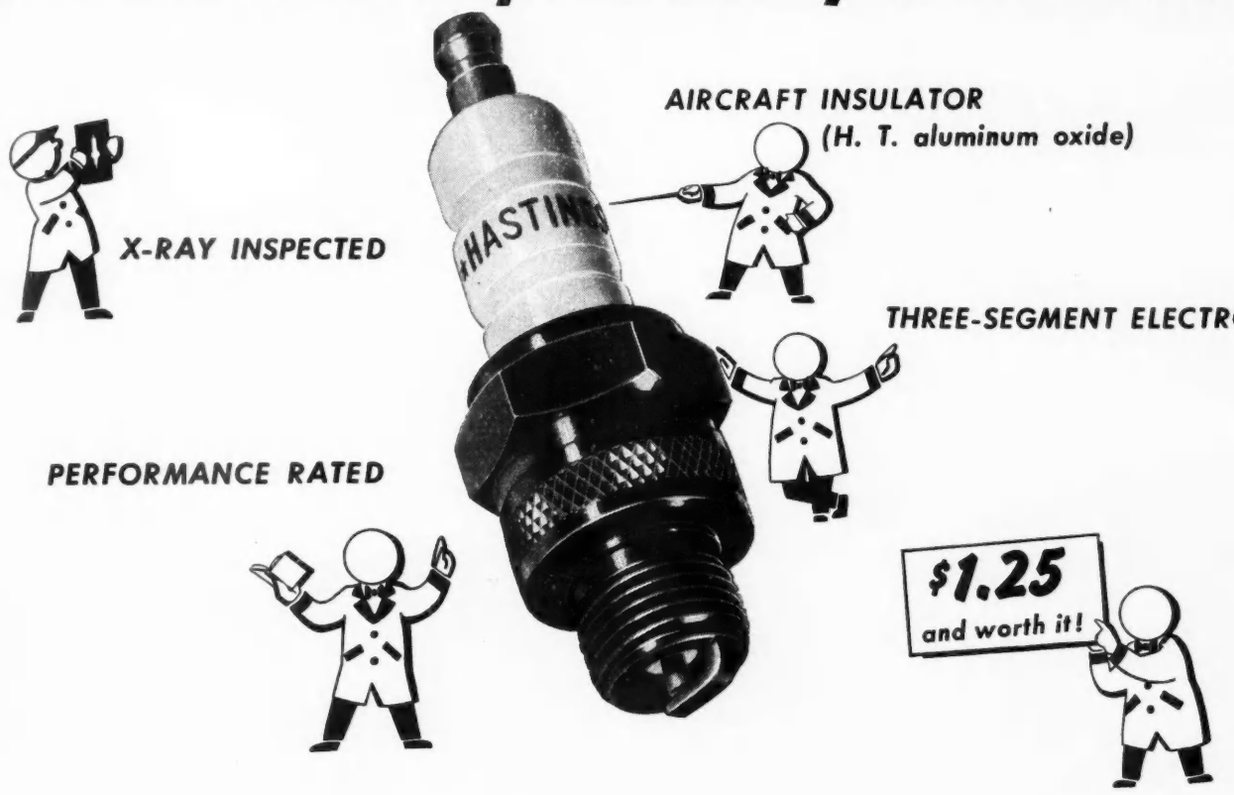
Blackhawk's Porto-Power straightening a front axle on a heavy truck

Hydraulic Rams

THERE are many types of hydraulic rams and accessories on the market. All are highly versatile, efficient, easily used for a variety of service jobs. They are indispensable to such work as body straightening, cylinder sleeve pulling, sleeve installing, inserting and removing shackles, and in fact every spot where a powerful controlled force is required. They push, pull, lift, press, spread, bend and clamp. Attachments are available for squaring the body, straightening the cab, pushing out side panels, aligning doors, squaring window

(TURN TO PAGE 130, PLEASE)

Here's the New Spark Plug that costs more—yet actually saves money!



It's Hastings Aero-type . . . the sensational new plug that's priced at $1.25—yet pays for itself in trouble-free service and longer life.

Fleet operators and car owners say they've never seen anything like Hastings for performance. Car dealers, garages and filling stations report phenomenal sales.

The reason: Hastings has created a vastly superior spark plug—an automotive plug built to finest aircraft standards, including super strength H. T. Aluminum Oxide insulator. Each plug is X-ray inspected—a positive check for proper heat flow and construction.

Hastings Aero-type Plugs are performance rated, to assure the right plug for every operating condition . . . to make selection easy . . . to simplify inventory.

For better spark plug performance in cars, trucks and tractors—Hastings is the answer.

Every Plug X-Rayed to Assure Maximum Service

Dept. G, Spark Plug Division
Hastings Manufacturing Co., Hastings, Michigan

HASTINGS
Aero-type
SPARK PLUGS

Featuring (H.T.) Aluminum Oxide Insulator

If Hastings Spark Plugs are not yet available in your territory, write direct for illustrated catalog. Distribution is being developed as rapidly as possible—your jobber will be able to supply you soon.

Hydraulic Shop Equipment

(CONTINUED FROM PAGE 128)

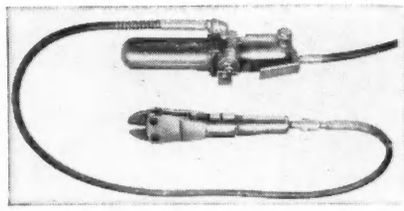
frames, removing and inserting hinge pins, straightening frames, etc. The same basic ram can be used to pull cylinder heads, pull wheels, line up motor supports. A heavy-duty model is used in straightening axles, trailer frames, etc.

This basic unit can be used in a frame to build a hydraulic press to provide an inexpensive, handy all-round press for general shop work.

Wheel and Valve Pullers

Additional adapters include a valve guide remover, hub puller, gear puller, arbor press, king pin remover, spring spreader, frame straightener and others. For Ford engines the pump-actuated hydraulic valve guide puller is indispensable. With this tool frozen valve guides can be removed in a matter of seconds. A slow, steady force of over 10 tons presses out the guide easily. The unit is easily carried from job to job and can be installed in a minute by simply attaching to any shop compressor air outlet.

Sleeve pullers can be made up from a similar unit. These "pneu-draulic" tools are said to center automatically and assure proper alignment of sleeve, block and puller during the operation. Smooth ram action eliminates distortion of the sleeve and damage to the cylinder sidewalls. Such tools can be used on blocks either in or out of the chassis.



The C-P bolt cutter fitted to the 10-ton hydraulic power unit for a number of shop uses

Tire Tools

THE tire shop will require a hydraulic tire demounter to save man hours and expensive labor costs. These machines will remove the toughest tire in a matter of minutes. In addition they prevent damage to tires, tubes, rims or wheels. The strong, evenly balanced pressure cannot be duplicated by hand. These machines are available in a variety of sizes and types, to fit any tire, rim or wheel. There is a hydraulic demounter within the price range of any shop, and there is sufficient saving in its installation to make it a wise investment for the shop doing its own tire work. One of the advantages of this unit is the fact that the danger of blown lock rings is averted through a safety feature. With any such unit, the operator can stand aside conveniently so that there is no chance of injury.

Hydraulic tire spreaders should be considered for the tire shop. These can be had in either pedestal-mounted types or in hand tools. Use of such a tool will enable the tire inspector to spread the beads and hold them apart so that a detailed inspection can be made. The location of a potential tire failure—or the catching of a break in time to salvage the casing will soon pay for a machine of this

(TURN TO PAGE 132, PLEASE)

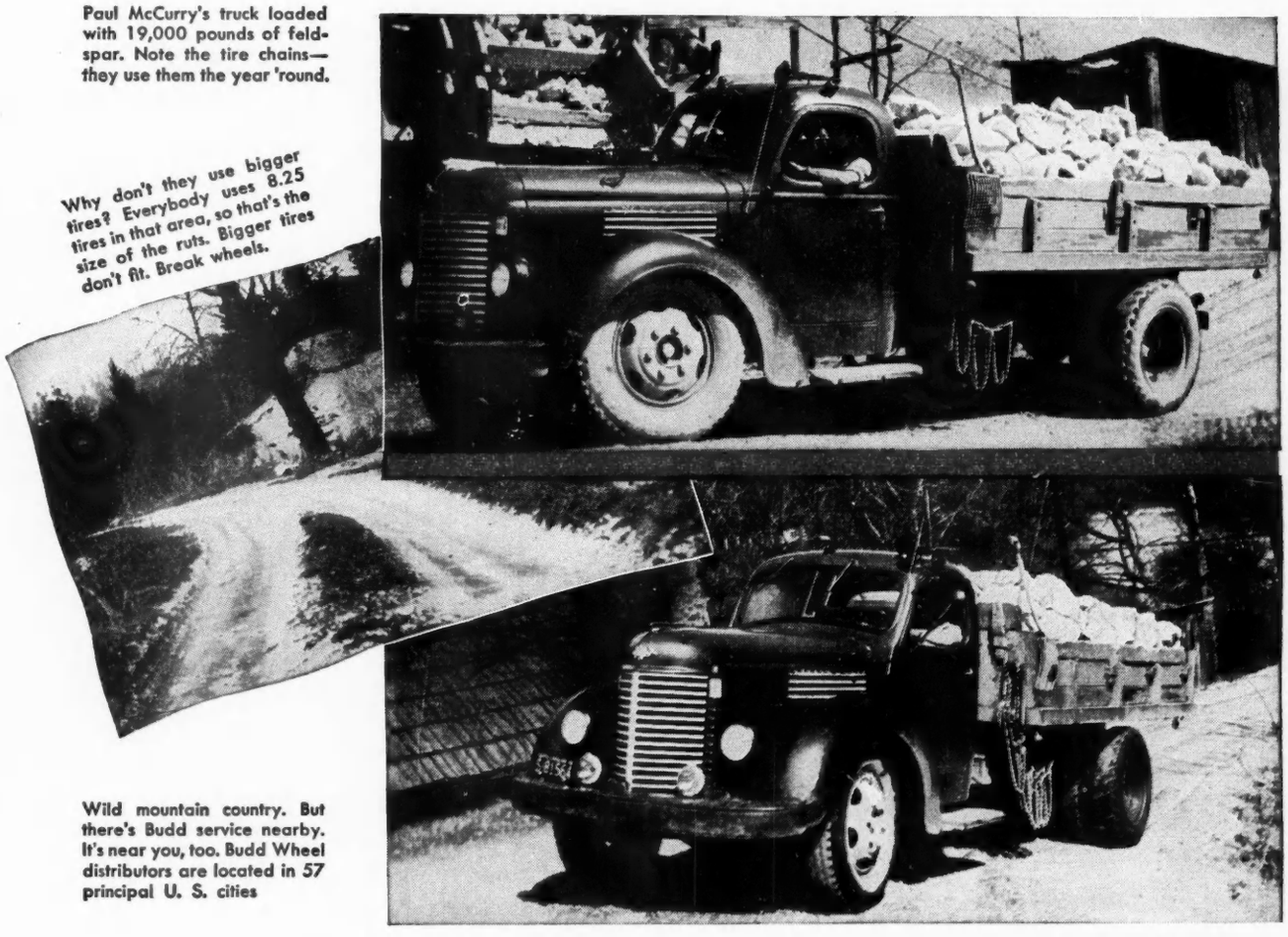
Stopped the wobble...Doubled tire life

Around Spruce Pine, in North Carolina's Blue Ridge Mountains, are mines producing feldspar and olivine. Rough country. Rutted mountain roads. Independent truckers hauling from the mines nearly went crazy with rim wobble. "The trucks would wobble so bad at times the drivers could hardly keep them on the road" writes Bill Threatt, of Carolina Rim & Wheel Co., Budd distributors in Charlotte. "And no tire mileage—10,000-12,000 miles."

A Spruce Pine tire dealer, Tri-County Tire & Recapping Co., persuaded one of these truckers to change to Budd Wheels. Wasn't long before all the rest followed suit. Now they're getting 25,000 plus miles on their tires. And no more wobble. And the local truck dealer is specifying Budd Wheels on all new deliveries. It's performance like this that makes Budd Wheels for trucks and busses outsell all other makes combined. The Budd Company, Detroit 14.

Paul McCurry's truck loaded with 19,000 pounds of feldspar. Note the tire chains—they use them the year 'round.

Why don't they use bigger tires? Everybody uses 8.25 tires in that area, so that's the size of the ruts. Bigger tires don't fit. Break wheels.



Wild mountain country. But there's Budd service nearby. It's near you, too. Budd Wheel distributors are located in 57 principal U. S. cities

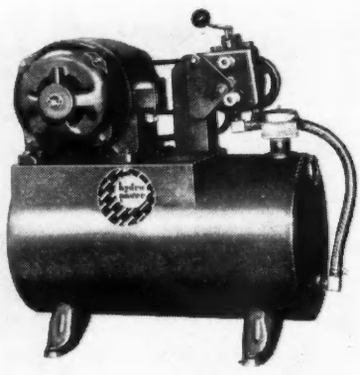
Hydraulic Shop Equipment

(CONTINUED FROM PAGE 130)

type. Hydraulic machines are simple to operate and will save an appreciable amount of time due to the ease with which they can be used.

Other Equipment

THERE are a hundred other ways to put hydraulic power to work for the modern shop. For instance, bolt cutters can be attached to several power units, including the Pneudraulic pump. Pipe benders can be procured at a nominal cost. The hydraulic vise can be used to advantage in many maintenance shops. In fact, the fleetman has but to name the equipment desired. Manufacturers will provide the power units and appropriate reliable accessories to do the work.



The Paul Bunyan, Jr., hydraulic power unit used to supply power for various units listed above. Designed by Hydra-Power, Inc.

END

(Please resume your reading on P. 54)

TO CHANGE RADIO CLASSIFICATION

The Federal Communications Commission recently announced that it proposes to replace the present experimental General Mobile Radio Service with three new classes of mobile radio communication service on a regular basis.

The new classifications proposed are: *Land Transportation Radio Services*—to provide communication facilities for intercity buses and trucks, urban transit vehicles, railroads and taxicabs. *Domestic Public Mobile Radiotelephone Services*—to furnish a common carrier mobile radiotelephone service to the general public. *Industrial Radio Services*—for miscellaneous use, such as by delivery and pickup services, auto clubs, doctors' cars, ambulances, etc.

Under the new proposals for the Land Transportation service eight frequencies in the 30-40 megacycle band are assigned to *intercity truck radio service.* The proposals for the Domestic Public Mobile Radiotelephone services contemplate a communication service for-hire between land mobile and base radiotelephone stations for the purpose of furnishing general, dispatching and signaling communications. Seven zones are established for assigning frequencies in the 30-40 megacycle range for Public Mobile service, and such 30-40 frequencies have been pooled with the available frequencies in the 44-50 and 152-162 bands previously allocated to this type of service.

The proposed new Industrial Radio services will consolidate a number of radio services, reduce the overlap between them, and increase the number of businesses eligible to use radio media. Facilities will be provided for safety and operational purposes in connection with such enterprises as agriculture, construction, logging, minning, etc. Stations in the proposed Industrial Radio Services will be grouped into Power, Petroleum, Forest Products, and Special Industrial Services.

PRICES REDUCED

$10.00 for 6 Volt Coil
$12.50 for 12 Volt Coil

THE GENUINE *Mallory* MASTER COIL

OVERCOMES NORMAL SPARK LOSS • IS COMPLETELY WATERPROOF • IS OIL SEALED AND AGE-PROOF

The Mallory Master Coil—for either 6 volt or 12 volt systems—is something brand new in a waterproof, long-lived ignition coil.

Its water-proof design is a novel Mallory development. The coils are housed in bakelite and the windings are completely sealed in a special transformer oil to eliminate short circuits or breakdowns. The wire leading to the distributor is also sealed in to make this coil absolutely water-proof. To support this claim the Mallory Coil can be completely submerged in water with the engine continuing to run.

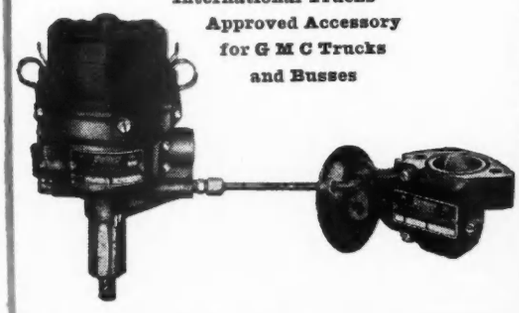
The Mallory Master Coils will deliver more energy than ordinary coils so that a hotter spark is produced; hence with a Mallory Master Coil, the engine will always start easily, even when the battery is low in cold weather. Extreme dependability and superior performance are further assured because of the water-proof housing of the Mallory Master Coils.

Our reputation among fleet operators for building dependable and efficient coils, condensers, and distributors, is enviable and has been gained through years of satisfactory service.

DISTRIBUTION OF MALLORY PRODUCTS for Sales and Service May Be Open in Your Territory. Write us for full details.

THE NEW MALLORY DISTRIBUTOR—GOVERNOR IS NOW STANDARD ON

American Aerocoach
Autocar **Federal Trucks**
Optional Equipment on International Trucks
Approved Accessory for G M C Trucks and Busses



MALLORY ELECTRIC CORPORATION

Manufacturers of Automotive Electrical Devices

DETROIT 4, MICHIGAN

Maintenance Group

(CONTINUED FROM PAGE 64)

Their Maintenance
2. Retarders
   Hydro
   Electric

July

WELDING AND APPLICATION:
1. Steels
   Common Carbon
   Stainless
2. Brazing
   Application
3. Cutting
4. Flame Hardening
5. Electric
6. Aluminum
7. Die Cast Metals

September

WHEELS AND THEIR MAINTENANCE:
1. Spoke
2. Disc
3. Differential Type

October

CABS:
1. Driver Comfort
2. Visibility
3. Seating
4. Accessories

November

ELECTRICAL WIRING:
1. Frame Wiring
2. Ignition Wiring
3. Accessory Wiring

December

LUBRICATION:
1. Oils and Types
2. Greases and Types
3. Additives
4. Salvage of Lubricating Oils and Uses

January

INSTRUMENTS:
1. Dashboard Instruments (Wrong Nomenclature)
2. Instrument Panel
   Ammeter
   Oil Pressure
   Water Temperature
   Speedometer
   Fuel Gages
3. Added Instruments
   Vacuum Gage
   Oil Temperature Gages
   Air Pressure Gages
   Tacometer
4. Control Instruments
   Service Recorder
   Tachograph
   Set Hand Tachometer

Of course, a certain amount of flexibility in program arrangement is necessary to allow for any timely subject relative to legislation, new technical or political developments, etc.

The standard procedure at each meeting calls for a guest speaker on the subject designated for discussion. A recognized authority is always chosen, who speaks not on a theoretical approach to the subject but from actual working experience. Speakers talk on an average of about 45 minutes, and give their subjects thorough coverage as indicated by the program breakdown given above. Wherever possible, motion pictures, slides, blackboard, and easel are used to make the lectures more alive and informative.

Two-Part Open Forum

ON completion of the talk, an open forum follows. The first part of the forum is devoted to questions on

(TURN TO PAGE 136, PLEASE)

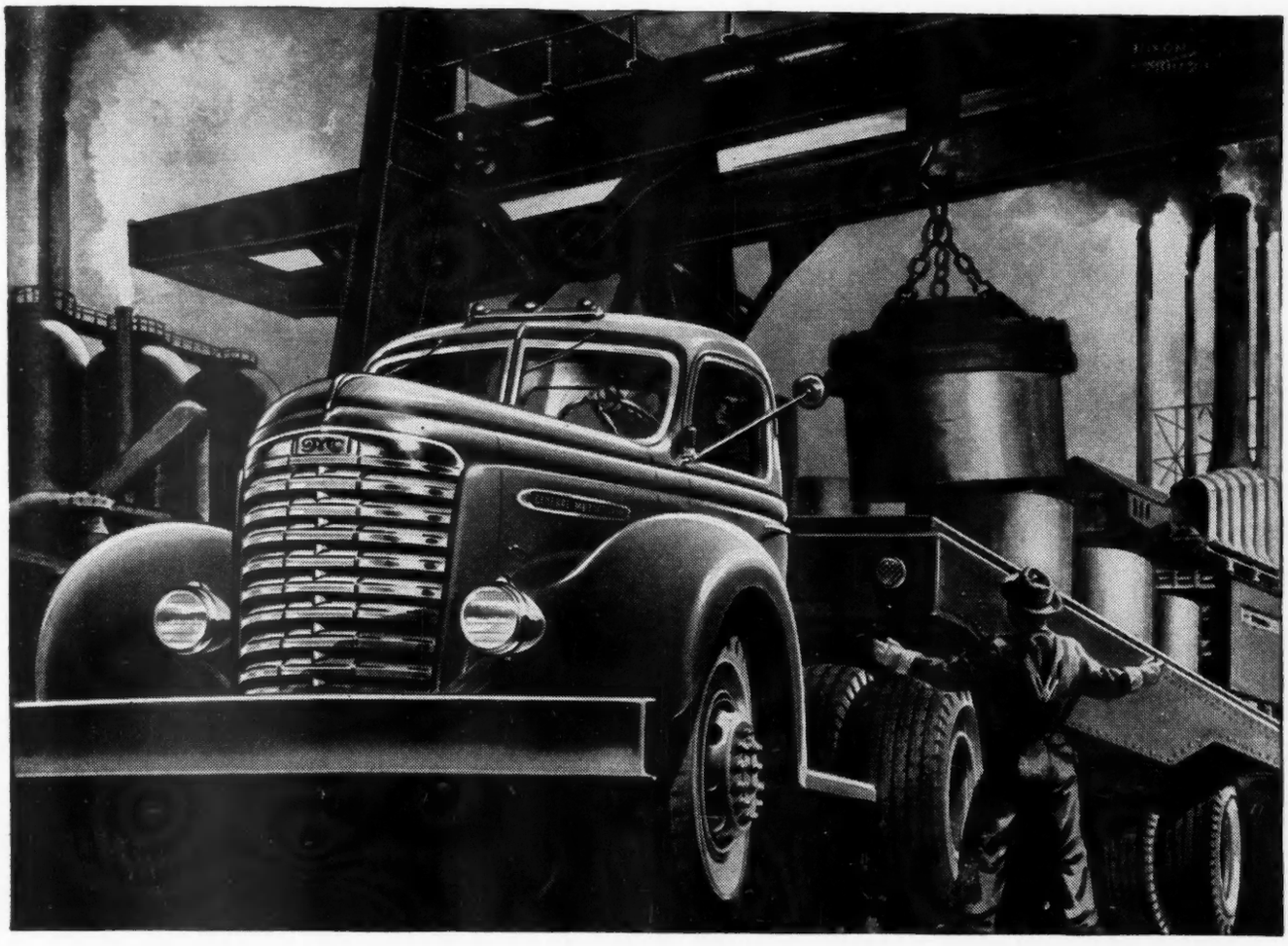
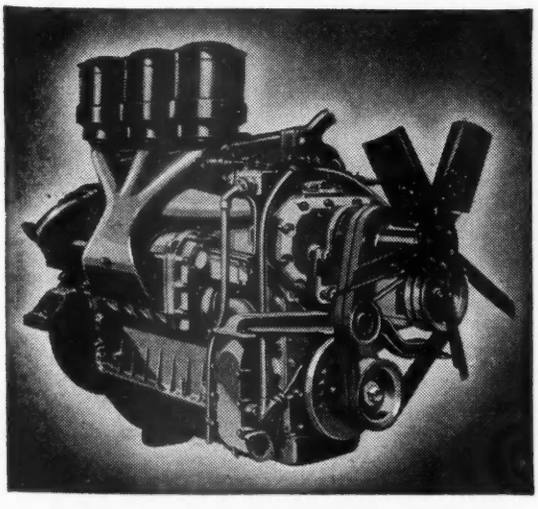


Illustration is drawn from actual photograph showing "850" series GMC hauling 40 tons of rolled steel between plants of a large steel mill.

BUILT TO "TAKE IT" . . . GASOLINE OR DIESEL



GMC heavy duty engines are available in six sizes . . . 308, 361, 426 and 477 cubic inch gasoline engines of famous GMC "Army Workhorse" design . . . four- and six-cylinder GM 2-cycle Diesels of 133 and 200 horsepower respectively. Illustrated is the "6-71" Diesel.

GMC heavy duty trucks are built in weight ratings that go up as high as 90,000 pounds for truck, trailer and load. That's a lot of weight, and it calls for big powerful engines . . . heavy, husky axles . . . and deep, thick frames, plus rugged strength and sturdiness in every other structural part.

GMCs are designed and engineered by men who are expertly versed in heavy hauling applications, gasoline and Diesel. They are produced in factories devoted exclusively to the production of commercial vehicles.

That's why GMC heavy duty trucks are the choice of so many of the nation's most experienced and successful heavy haulers. Make them first choice for your job, too . . . from the many gasoline and Diesel models now available for quick delivery.

GMC TRUCK & COACH DIVISION • GENERAL MOTORS CORPORATION

Tune in Henry J. Taylor, "Your Land and Mine," Mutual Network, Monday and Friday.

GMC TRUCKS

THE TRUCK OF VALUE

GASOLINE • DIESEL

Maintenance Group

(CONTINUED FROM PAGE 134)

the subject. When these have been exhausted, the forum then becomes an open discussion on any and all maintenance problems.

Typical of the meetings is one recently held on shop operations as applied to truck fleet maintenance, servicing and heavy repairs or reconditioning of transportation equipment. Speaker for the evening, I. J. Wilson, Maintenance Superintendent, Signal Trucking Service, thoroughly covered shop organization; channeling of equipment through the shop with minimum loss of operating time; servicing equipment; and preventive maintenance. Questions following the talk were first directed toward Mr. Wilson to learn further details of his company's operation. Questions in the second portion of the open forum, sought the answers to individual maintenance problems. In order that fleet operators, superintendents, maintenance supervisors and mechanics attending the meetings may get as full an answer to their problems as possible, manufacturers' representatives are always invited. For instance, on the tire discussion night, representatives of all tire manufacturers are invited and are ready with useful information.

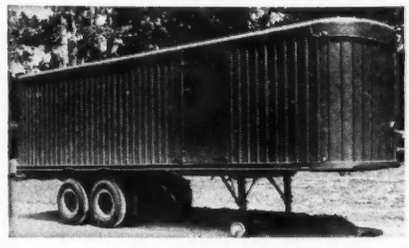
Careful Timing

FAST moving meetings are essential to maintain interest. The Southern California group takes the least possible time to give the most practical information. Selection of a centrally located meeting place helps save time; thus, a restaurant in the industrial district makes it easy for men to attend directly from work. Dinner is scheduled and promptly served at 6:30 and the main speaker begins at 7:30. The speech and discussion are rarely allowed to go beyond two hours. The chairman sets the pace and by alert control of the meeting eliminates irrelevant questions and unnecessary discussion.

The value of the meetings as a medium for keeping maintenance men well informed and offering them an "information exchange bureau" is reflected in attendance records and management interest. Average attendance at each session is about 50, with management usually paying the dinner bill for company representatives.

(TURN TO PAGE 140, PLEASE)

Fruehauf-Carter Van



The Fruehauf-Carter division, Memphis, has launched production of a new line of corrugated panel van trailers. The new Fruehauf-Carter van incorporates many of the features heretofore found on the Fruehauf Aerovan and Stainless Steel Trailers. These include the Fruehauf two-speed-transmission supports, Composite floor, multiple-welded all-steel doors and Fruehauf underconstruction. Optional underconstruction is available on this model. The purchaser can select either Fruehauf "Multi-Rate" single axle springs or Fruehauf Gravity Suspension Tandem

The Walker Laminar* Oil Filter

WITH PATENTED Laminar CONSTRUCTION

Featuring the Guaranteed Walker Laminar Replacement Cartridge For *All* Filters

● Soon everyone will be talking about the great new development in oil filters—the Walker *Laminar* Filter.

They'll be talking about *three-dimension filtering*—surface filtration, depth filtration and progressive filtration—which all sums up to 3-way motor protection through better filtration.

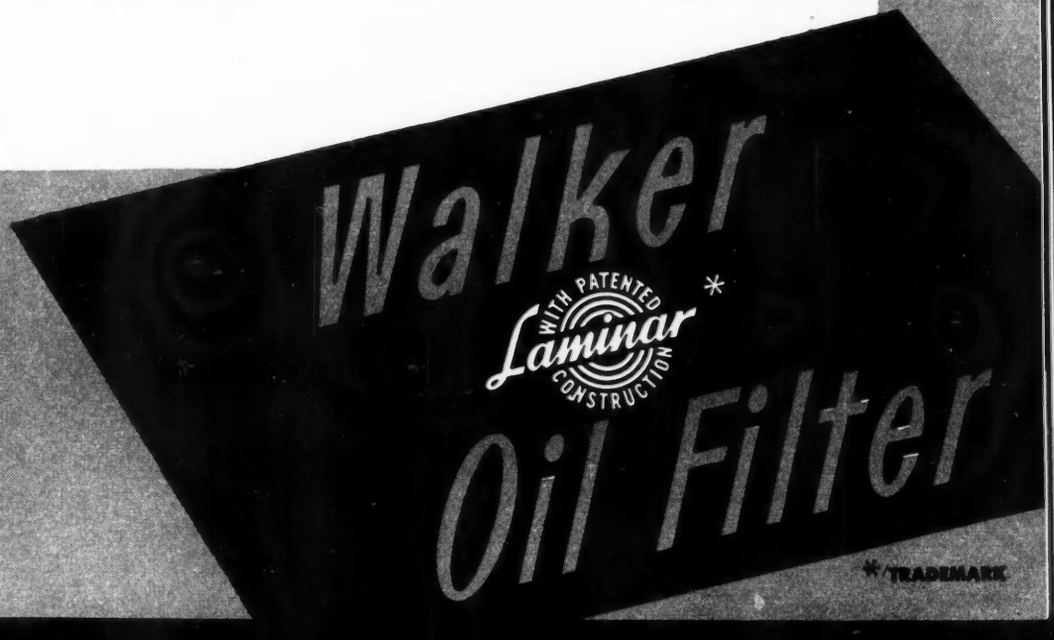
Laminar construction makes possible for the first time an oil filter cartridge of predetermined and uniform characteristics . . . positive, predictable performance. Layer upon layer of an entirely new, chemically pure oil filtering material (in the patented Laminar design) takes out even microscopic particles of harmful dirt and sludge; keeps oil clean for thousands and thousands of miles.

That's why Walker dares to back up the *Laminar* cartridge with such a strong guarantee—that's why Walker *Laminar* is America's finest oil filter!

Walker Manufacturing Company of Wisconsin, Racine, Wisconsin. Makers also of Walker Silencers, Walker Jacks and Walker Electric Lifts.

Guarantee!

The Walker Replacement Cartridge with patented Laminar construction is guaranteed against channeling, by-passing or migration of the filtering material throughout its active life. Any cartridge found not to comply with this representation will be replaced without charge.



Maintenance Group

(CONTINUED FROM PAGE 136)

Management continually urges superintendents, maintenance men, and mechanics to attend realizing that the well-informed employee is a greater asset to the company.

Meeting announcements are not left to any hit or miss method. At the beginning of the year, the proposed program for the full year is mailed out. A week before each session, a reminder is put into the mail and this is followed up with a telephone call the day before the meeting.

Minutes To 500

WORK of the committee, however, does not end with the monthly meetings. Follow-up is very important. So that all members of the association will receive the benefit of the swap of ideas and information at the regular sessions, all meetings are transcribed and mimeographed. Copies go to a mailing list of 500, including all national truck organizations.

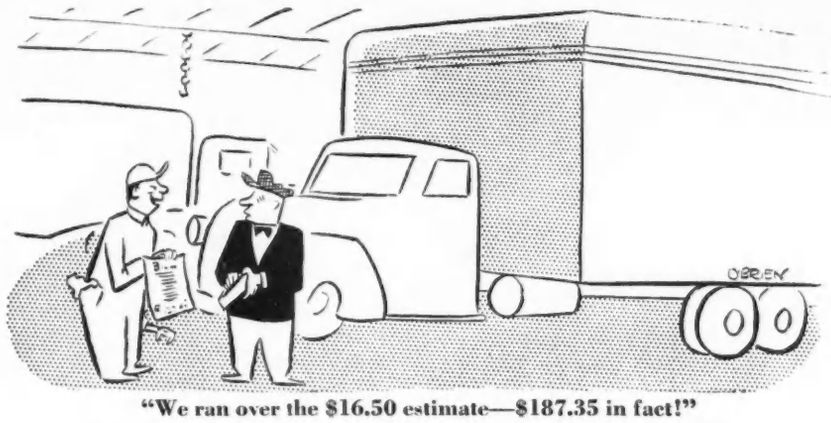
An interesting feature of these mimeographed copies of the committee's accomplishments is the list of people in attendance. This gives management an opportunity to see which of its men are interested, and the size of the attendance indicates both to management and to the committee the general interest in the particular topic discussed. Fleet operators in this area have endorsed the activity of the committee. They feel that they have been helped to reduce maintenance costs through better informed, more efficient employees.

END

(Please resume your reading on P. 65)

West Coast Ford

The new separate truck and fleet headquarters recently opened by S & C Motors, Ford dealers, in San Francisco, is housed in a series of buildings occupying almost an entire city block with 100,000 sq ft of floor space. Offices, showroom and parts department are contained in the main group of buildings. A $250,000 inventory of replacement parts will be carried at all times



"We ran over the $16.50 estimate—$187.35 in fact!"

Dust Bogey

(CONTINUED FROM PAGE 55)

the diesels, $18,000, major overhauls at double our present average labor and parts cost would prove sound maintenance operation.

Automatic Shutters

WHILE this is not a dust factor, all of our off-highway units must be equipped with automatic shutters. These operations are over hilly roads. At the top of the hill the motor is at peak heat, if the truck starts down the hill without the shutter closed the valves and rings would cool too quickly and stick.

These automatic shutters are set to hold engine temperature at 170 deg F and maintain it within 10 to 20 deg. Without shutters, this temperature variation runs as high as 60 deg. The shutter system is checked each day and filled with fluid each week.

The cab of each unit is also equipped with a heating-ventilating system, which gives filtered air conditioning for the driver. This system is checked daily and serviced once a week.

Brake Controls

All of our off-highway units are now equipped with a brake-away system.

This is operated by a push button on the panel board. The driver, by pushing his control button, can lock his trailer brakes at the same time reserving the truck brakes for independent action.

Each unit also has a front brake by-pass control. This is particularly valuable in the winter with ice and snow and wet off-highway roads. The driver can adjust power to his front wheel brakes for different road conditions.

Tire Program

EACH driver is required to check all 18 tires for pressure, and check for general condition, before he leaves his truck each evening. Any tire service needed must be reported before the driver leaves the garage. Once each week our tire man checks all tires on all units. This weekly check is handled Saturday afternoon and evening and Sunday.

All new tires are started on the eight drive wheels, and are stepped down to the trailer. All tires to be recapped are placed on the spreader and inspected by both the tire man and the shop foreman. Before the tire is recapped it is also inspected by the recapper from the local firm doing the work. This inspection is handled at our own shop. We have found that double checks and particular atten-

(TURN TO PAGE 142, PLEASE)

"That's George!"

Dust Bogey

(CONTINUED FROM PAGE 141)

tion to inspection of carcass adds considerably to the recap life.

Our tire life is all figured on a basis of 1000 board feet handled. Since we adopted the policy of daily driver's checks for pressure, and the weekly check by our tire expert, and careful recap inspection, we have been receiving 30 per cent more recap life.

Tires are matched at each change. We have found this matching a strong longer life factor.

Holding Down Accidents

Fighting dust is fighting accidents. We have found that the unit which is kept clean and free from the dust bogey is the one that has the best accident record. There are two primary reasons for this. First is the fact that clean trucks make detection of needed repairs much faster and much more thorough. Second is brakes. With dust kept out and lubricant kept in, we can be reasonably sure the trucks will stop.

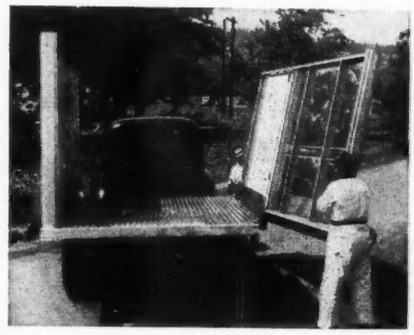
Formerly we painted our trucks green. We have found that green blends with the country side and is in itself an accident hazard. All of our trucks are now being painted bright yellow.

And we have found that we have a better accident record with the gas units than with the diesels. Strangely, this better record has nothing to do with the unit itself but with the driver. We are able to get plenty of well-trained gas drivers but few who know the intricacies of the diesel, particularly with regard to maintaining proper rpm. The average gas driver spends too much time "worrying" about the diesel, hence he becomes more accident prone when handling the diesel equipment.

END

(Please resume your reading on P. 56)

Aluminum Flooring



A new aluminum alloy, "Coralite", designed for body flooring, has been developed by Brown Industries of Spokane, Wash. The corrugated material is .09 in. thick and ribbed, ¾ in. in depth. It is fabricated without seams.

The new flooring was developed to reduce weight in construction of trailers and bodies. It is said to be durable, splinterproof and moisture-proof. "Coralite" cleans perfectly and, if necessary, can be sterilized for handling various types of perishable cargoes. Washing and steam cleaning will remove all taints from body interiors, the company states.

"Coralite" not only replaces wooden or composition flooring but duct boards for vents. It is not slippery and does not hamper loading or walking, it is claimed.

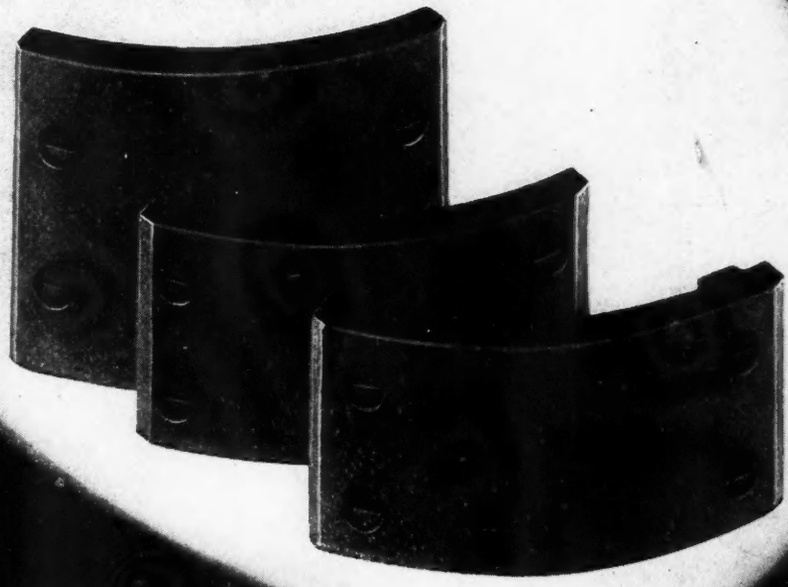
The relative rigidity or stiffness of "Coralite" is comparable to a solid ½ in. of aluminum plate but weighs only 25½ per cent of such material. The flooring has a theoretical uniform load-carrying capacity of 36,000,000 lb in a 35-ft trailer.

Thermoid

THERMO-BLOCKS

Thermo-Blocks are built for
heavy duty service. They always give top
performance under all operating conditions.
Their longer life reduces downtime,
lowers maintenance costs. Get the
Thermo-Blocks especially designed for your units.
Use them on all heavy duty re-line jobs.

Thermoid Company, Trenton, New Jersey



The "Longer-Life" Line for heavy duty service

1936 Stewarts

(CONTINUED FROM PAGE 49)

cylinder engines — Waukesha 45FKs and Continental F-4-162s—with 133 and 162 cu in. displacements, respectively. Although previously rebuilt once or twice, these engines could be rebuilt with a maximum of .030 in. oversize pistons. Parts for both engines are available.

The chassis are unusually rugged for trucks of this capacity. They have Spicer full-floating rear ends, Salisbury-Spicer front axles, 10 in. Borg & Beck clutches, Warner Gear transmissions, 13 x 2 in. Lockheed hydraulic brakes, Ross steering gears and 6 x 2¼ x 5/32 in. frames.

It was also discovered that new bodies of the cab-integral package delivery type with twice the capacity of the old bodies could be custom built by a local body builder at a cost to the fleet of approximately $1200.

Added to this would be the cost of rebuilding the chassis — a figure which has subsequently worked out to an average of $350 per vehicle, including parts and shop labor on a time-fill-in basis, plus painting and trim costs which average $75. This would give a total of $1625 for the finished vehicle—a vehicle with twice the cu ft capacity of the same unit before renovation and virtually equal both in capacity and appearance to new vehicles costing in the neighborhood of $2400.

In addition new trucks of the capacity desired have been mighty hard to get.

On the basis of this figuring the idea looked sound so it was decided to go ahead with the conversion of three Stewarts on an experimental basis. Not only did the calculations prove accurate but the overall results turned out even better than expected. The converted vehicles had the carrying capacity required and good eye appeal as well. So on the basis of the experimental job all 29 of the Stewarts are being converted. The one illustrated is number 16.

9.8 MPG In City Driving

TRUE, the newer vehicles have more horsepower. But, argues Fleet Superintendent James R. Abbott, these converted Stewarts have all the power he needs for stop-and-go city delivery, and economy-wise they far outshine the new models. To prove this point he cited gasoline mileage figures. Four of the Stewarts picked at random averaged 9.8 mpg all in city winter driving. The average of five new trucks with similar carrying capacity and including considerable country driving was 9.9 mpg and the average for three more of another type, again with considerable over-the-road driving thrown in was only 7.2 mpg.

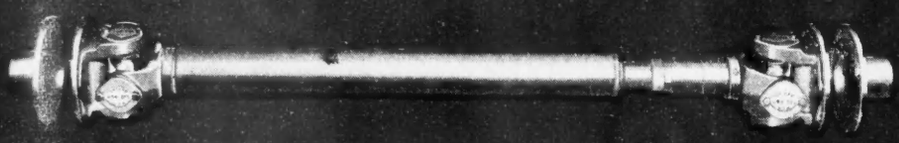
Weight figures run like this:

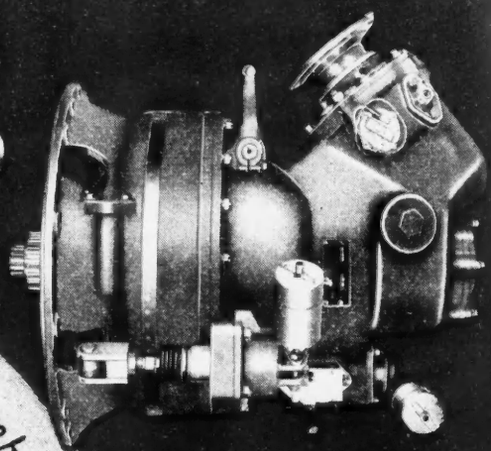
Stewarts before conversion	3400 lb
Stewarts after conversion	4160 lb
Comparable new vehicles	4700 lb

Rebuilding Is Complete

TO get the old chassis in shape for their new duties nothing has been overlooked. In the first place the engine, transmission, clutch and wheel assemblies are removed. Then the chassis gets a thorough cleaning. Next the springs are removed, taken to a spring specialist and reset to original specifications. A seven-leaf helper

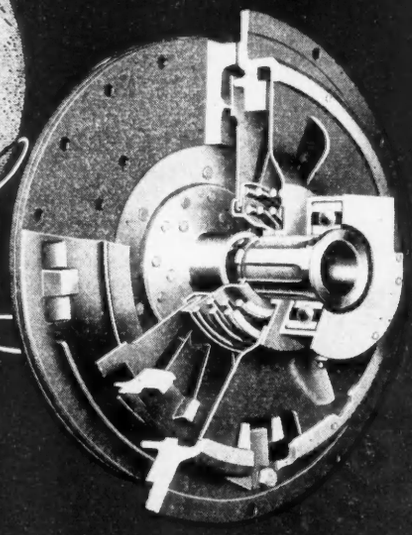
(TURN TO PAGE 148, PLEASE)

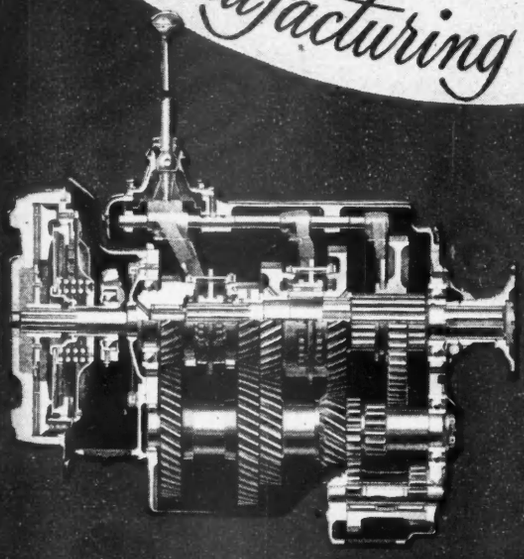




Designing, Developing, Engineering, Manufacturing and Service

Spicer



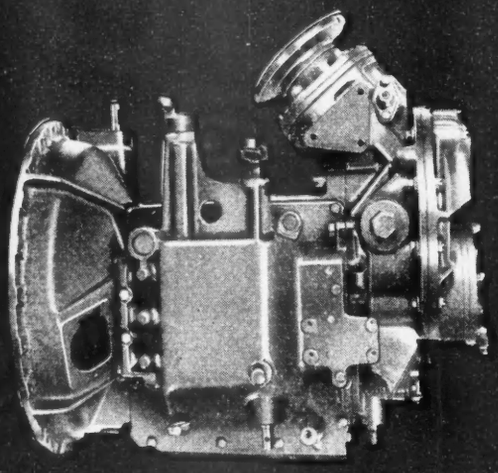


preferred by the Automotive Industry for over 44 years

Spicer has progressed with every technical advancement made by the automotive industry since its infancy.

Spicer has created and produced designs that have revolutionized many phases of power transmission. Typical of these is the Spicer Universal Joint, pioneered for automotive use by Spicer in 1904, and recognized as an absolute necessity to automotive advancement. Spicer has helped make the American automotive vehicle the lowest cost, most efficient in the world.

A large proportion of the manufacturers in the truck, bus and passenger car field uses one or more of these well-known Spicer products: Transmissions, Torque Converters, Passenger Car Axles, Clutches, Stampings, Parish Frames, Universal Joints and "Brown-Lipe" Gear Boxes.



44 YEARS OF Spicer SERVICE

TRANSMISSIONS
TORQUE CONVERTERS

SPICER MANUFACTURING *Division of Dana Corp.*
TOLEDO 1, OHIO

PASSENGER CAR AXLES • CLUTCHES • PARISH FRAMES • STAMPINGS • UNIVERSAL JOINTS
SPICER "BROWN-LIPE" GEAR BOXES • RAILWAY GENERATOR DRIVES

1936 Stewarts

(CONTINUED FROM PAGE 146)

spring is added on each side at the rear. Spring shackles are rebushed and in some cases new hangers fitted. New shafts and bushings are fitted on the clutch and brake pedal cross arm. Brake lines are checked and new hose are fitted. When needed rear wheel castings are reamed and a $\frac{1}{16}$-in. bushing inserted to give perfect fit to bearings.

Meanwhile the engine has been disassembled. Block, piston and con rod assemblies, crankshafts and camshafts are sent to a near-by machine shop where the block is bored (the average is .030 in. over-size) new pistons, pins, rings and undersized bearings are fitted, rods are trued, crankshaft is ground and ridges removed from the camshaft.

Back at the laundry's shop the engine components are reassembled using a line boring bar for the main bearings to assure perfect fit. A careful check is also made of camshaft lobes, the entire unit being discarded if tolerances are beyond specified amounts.

Rear ends and transmissions are carefully checked and rebuilt, if necessary. All clutches are rebuilt with a new cover assembly the general rule. Steering gears are checked and rebuilt if necessary and the steering column moved up to fit new brackets installed on the body cowl.

Wide Base Rims

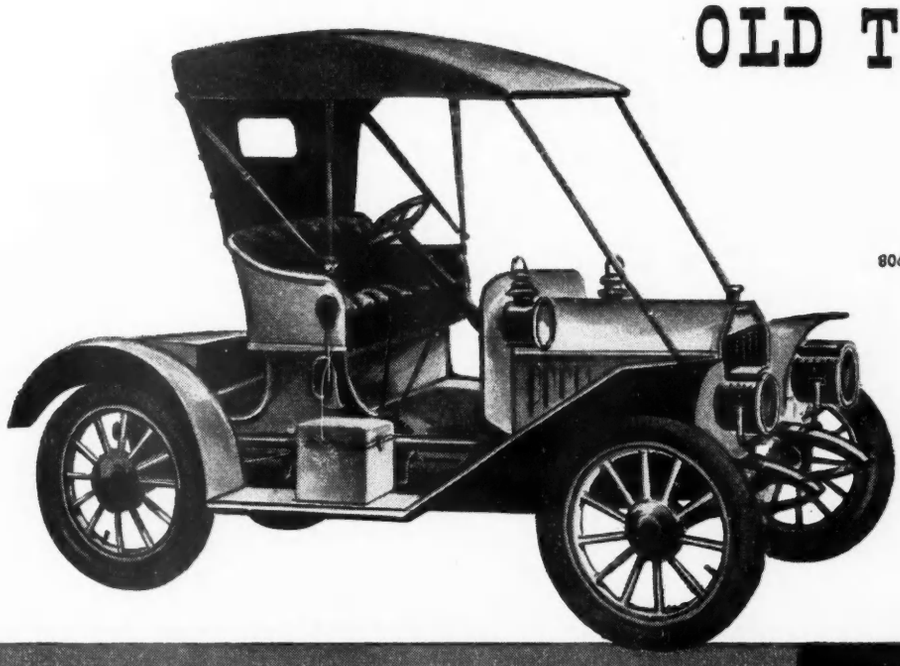
THE standard 16-in. drop center wheels are sent to a local rim supplier where rims are cut off and discarded and new 6.00 in. wide base semi-drop center rims with removable rims are installed. Then tire sizes are stepped up to 7.00/16-6 ply on the front and 7.50/16 on the rear, 8 ply. front and 7.50/16-8 ply on the rear.

The body follows conventional lines of the present day cab-integral high-capacity package delivery model. Inside dimensions are 8 ft long from back of driver's seat, 5½ ft high and 5½ ft wide. It is fabricated with oak frames, high-tensil steel panels, Weldwood lining and an oak floor with steel plate on top. Side doors slide easily and are equipped with catches for both open and closed position. The two rear doors are mounted with

(TURN TO PAGE 150, PLEASE)

can you recall this

OLD TIMER?



THE CAR SHOWN HERE IS A 1908
BUICK MODEL X RUNABOUT.

CLAWSON & BALS

AN OLD TIMER IN AUTOMOTIVE PARTS BRINGS YOU "BOHNALITE" PISTONS

Back when the automotive industry was still a youngster, Clawson & Bals was already a well known name in automotive parts. Today Clawson & Bals is a real old timer, with nearly thirty years of experience . . . the kind of experience it takes to make the finest parts. And through the years new services and new parts have been added so that now Clawson & Bals brings you a complete line of Genuine "Ring-True" products, including famous "Bohnalite" pistons. Ask your C & B Jobber for them. Clawson & Bals, Inc., 2508 South Michigan Ave., Chicago 16.

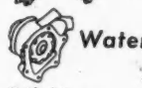
IT TAKES EXPERIENCE TO
MAKE THE FINEST PARTS

Genuine RING-TRUE C&B PRODUCTS


Engine Bearings


Rebabbitted and Reconditioned Connecting Rods


Pistons and Pins


Water Pumps and Repair Kits


Spring Shackles


Flexible Fuel and Oil Lines


Hydraulic Brake Parts and Brake Hose


Shock Links


Valve Springs


Babbitt Metal


Chevrolet Rod Dipper

Use postage-paid card inserted at page 57 for free information on advertised products

1936 Stewarts

(CONTINUED FROM PAGE 148)

piano hinges and swing outward against rubber stops in the open position. A soft duct top is used, a feature which it is claimed saves weight and costs and eliminates drumming.

The engine housing inside the front part of the body is fitted with a hinged cover plate on top, padded with sound insulation. Both side panels are completely removable giving excellent accessibility to the engine, when front wheels are removed. In addition, both radiator and engine slide out through the front grille with a minimum of confusion.

Now lest the readers may think the whole project to be something of a shot in the dark, it should be added that the company is adding *new* models of standard types as rapidly as it can get them. Among the list of new vehicles on order is a group of 10 ultra-modern jobs with all-aluminum bodies. In the fleet already are about 20 1946 and 1947 models. In operation the Stewarts are matched against these modern vehicles for performance, economy and efficiency, and they stack up well.

END

(Please resume your reading on P. 50)

BODY MEN MEET

At an organization meeting held June 18th in the Hotel Elkhart, Elkhart, Ind., the National Truck Body Manufacturers' Association received its charter from the State of Indiana. Over 150 of both the large and small commercial truck body manufacturers are members of the new association, which will act for this one quarter billion dollar industry, the only one of such size in the United States previously having no such organization.

Upper left, R. R. King; Upper right, Shipley D. Burton; Center, Frank E. Hartnell; Lower left, E. E. Miller; Lower right, Fred S. Glasier

Officers elected under the new constitution to serve for the remainder of the calendar year are: president, Frank E. Hartnell, Transportation Specialties, Elkhart, Ind.; vice-president of Western District, R. W. Allen, California Body and Trailer Co., Redwood City, Cal.; vice-president of Midwest District, E. E. Miller, DeKalb Commercial Body Corp., DeKalb, Ill.; vice-president of Eastern District, Fred S. Glasier, Glasier Body Corp., Newark, N. J.; secretary-treasurer, R. R. King, American Body and Trailer, Inc., Oklahoma City, Oklahoma.

Shipley D. Burton was selected as Secretary Manager of the new association, and will head up the permanent business offices at 1016 Du Pont Circle Building, Washington, D. C.

CCJ

Job Applicant: "I'm Gladys Zell."

Personnel Manager: "I'm pretty happy myself—have a seat."

for Safety's Sake..

SELL

WAGNER LOCKHEED HYDRAULIC BRAKE FLUID

Used in New Cars

Wagner Lockheed Fluid . . . Truck, bus, and car manufacturers use it.

Most Advertised

Wagner Lockheed Fluid . . . Advertised more than any other brake fluid.

Largest Selling

Wagner Lockheed Fluid . . . Nationally outsells competition.

EVERY REPAIRMAN NEEDS

Bulletin HU-17G and HU-197
Tips for better Brake Service—free on request

WAGNER LOCKHEED FLUID . . . AMERICA'S LEADING BRAKE FLUID

1. Assures year-round operating performance.
2. Mixes with other approved fluids.
3. One mixture for ALL cars and trucks.
4. Maintains chemical characteristics after long use.
5. Warehoused throughout U. S. and Canada.
6. Available everywhere through leading jobbers.

Wagner Electric Corporation
6470 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID · NoRol CoMaX BRAKE LINING · AIR BRAKES · TACHOGRAPHS ELECTRIC MOTORS · TRANSFORMERS · INDUSTRIAL BRAKES

H48-16

Super Bodies

(CONTINUED FROM PAGE 44)

any of our standard bodies, but surpasses any body we have seen on the market today. This body is shown in Fig. 3.

The principal objectives sought by this design is greater strength and lighter weight than our current bodies, simplified maintenance and repairs, plus the elimination of one of the greatest problems in body maintenance—rot and rust along the sill due to the accumulation of moisture within the panels.

Particular attention is called to the sub-frame sills, which are of oak, capped with C-channel steel, to which are welded bent steel cross bars which, in section, resemble a modified letter Z, as shown at A in Fig. 4.

The ends of the cross bars are securely welded to a bent steel side rail. —of similar though simpler shape, as shown at B in Fig. 4—running the entire length of the body.

The uprights are of bent high-tensile steel welded to the side rail.

The inside lower lining and water shed, shown at C, Fig. 4, are of 1/8-in. Jal tread, welded to the uprights and cross bars. This eliminates the necessity for corner iron supports on body sides and front, and prevents water from inside of the body getting in the walls.

The inside slat protection, D in Fig. 4, is of square-bent corrugated steel running lengthwise. This construction, added to the bent section lower lining, the lower belt and top rails, gives strength and rigidity to the sides and front.

The rub rail section, E in Fig. 4, of 1/8-in. steel, runs the full length of the body, with 3/16-in. steel plates welded to the cross bars. This member extends 1 in. up on the body panels, protecting them from water which collects on the rub rails.

The floor, of 1 7/8-in. oak with shiplap joints, is so installed that the boards can be removed without disturbing any steel work. As in our other bodies, drains are installed in the front corners of the body for use when washing the interior of the body and when hauling a wet load.

(TURN TO PAGE 154, PLEASE)

Automatic Temperature Control

A fully automatic mechanical temperature-control unit for trucks and trailers called the "Little Giant", is available in four models to meet the needs of various size vans for high and low temperature hauls. Model LGL is designed for bodies from 20 to 34 ft in length with 6 in. of insulation, to maintain a temperature range from zero to 30 deg F. Model LGH is for the same size van with 3 in. of insulation and will maintain constant temperatures of 30 deg and above. Both models feature automatic defrosting and a thermostat-controlled heater that will change-over from cooling to heating as outside temperatures vary. This feature enables a hauler to protect perishable cargo under any climatic condition. Model LGHC is exactly the same as Model LGH except no heating unit is installed. Model LG is for smaller vehicles, with a body length up to 20 ft

A Weather Whipper on Wheels

Men who specify cargo covers know what a difference it makes when they're made of Mt. Vernon Extra duck. They know they can expect the tops in cargo protection plus trouble-free performance under the most trying service conditions.

Mt. Vernon Extra's ability to fight off wear and weather results from its high degree of uniformity—a quality that starts with the careful selection of top grades of cotton and develops through scientific production methods guided by rigid laboratory controls.

For cargo covers that give you added protection, that cut your repair and replacement costs, specify Mt. Vernon Extra.

Mt. Vernon-Woodberry Mills

TURNER HALSEY
COMPANY
Selling Agents
40 WORTH ST. • NEW YORK

Branch Offices: CHICAGO • ATLANTA • BALTIMORE • BOSTON • LOS ANGELES • AKRON

Super Bodies

(CONTINUED FROM PAGE 152)

The roof is of all-steel construction. The side, front and rear members are of 14-gage steel, bent to give shape to the body and extend down over the panels to prevent water leaks. The roof bows are of formed steel sections, well braced, at the ends, to the top rails. The top covering is of 20-gage galvanealed steel, cherry riveted. The entire roof is assembled on a jig, and is installed as a single unit.

body, with flipper catches on the rub rail to hold them open.

It can be removed for repairs, simply by unbolting the fastenings.

The panels are of ¼-in. Plymetl.

All doors are of the same construction as the body. They are hung on heavy continuous hinges, with ⅜-in. brass pins, and equipped with heavy-duty, three-point locks, set flush in doors on 12-gage bent steel sections so that they do not interfere with the load. The rear doors open all the way around, and fold close to the

Front corners are reinforced with 4 x 4 x ⅛-in. formed angles from water shed to roof.

The rear bumper is made of 4-in. channel steel filled with oak, and extends 4 in. beyond the rear doors. It is covered with Jal tread.

All steel used in the construction of this body is of the high-tensile type, of gage sufficient for the requirements of the body. It is given a heavy coat of rust preventive during the course of fabrication and assembly.

We are expecting a great deal from this new body. Just how much more life and better service it will give than our standard current bodies, we are not yet in a position to say. However, we do think they will see many years of service, and we expect our body maintenance costs to take an appreciable drop.

Because of present body shop facilities are taxed to the fullest extent, and because our body preventive maintenance takes precedence over body building, we are not able to build all of the bodies we need. About 75 per cent are built under contract in a custom shop, the balance we build in our own shop.

END

(Please resume your reading on P. 45)

CCJ

The truck mechanic was groggy from lack of sleep. His helper playfully punched the bags under his bloodshot eyes and urged him to buck up.

"I know your wife left you," he sympathized, "but you mustn't let it get you down, old man. You've just got to try to get some sleep, you know. Why don't you try counting sheep?"

"Can't. I'm too busy counting my lucky stars."

"You've never been over this route in a heavy rain, have you?"

Remote Control for Scattered Fleet

(CONTINUED FROM PAGE 37)

5. Periodic car inspection reports.
6. Rules for field car servicing.
7. Emergency car repairs and new parts procurement.
8. Car liquidation and replacement.
9. Office life-history of the car.

Each field representative operating a car is assigned to a definite territory under a Division Manager responsible for 10 to 12 such representatives. A company field representative driving a car neither takes nor delivers merchandise orders; hence he needs only enough extra room in his car to transport his personal luggage and the advertising and display materials he will distribute among the 15 to 25 local wholesalers and retailers he normally will contact during a working day.

Standardized Vehicles

IN 1930 the Wrigley Co. began experiments with company - owned passenger cars through the operation of several makes of medium-priced cars. It was the company rule that the representative driving the car always should, if possible, have his car serviced and maintained only by a local agency representing that make of car, as promising the most expert possible service; however it soon developed that in many localities there would be no such agency for such an average medium-priced car. After several years of such operating difficulties, the company decided in 1934 to standardize on the three leading makes of low-priced cars which is their policy today.

They also standardized on the exact model to use. It is a two-door sedan with backseat cushions removed and replaced with a finish of masonite covering in appropriate color. All cars have red wheels; all are painted in the same uniform color of dark green. Also, there was an earlier period of about five years when the company experimented in having "Wm. Wrigley Jr. Company" neatly painted on the doors of each fleet car. It was decided in 1935 that in certain possible cases there might be "practical disadvantages" from this open display of the company name on a car. The company has always had the policy of requiring a representative to keep his car well washed and bright looking. This policy is aided by the company rule (somewhat relaxed during the recent war period) of turning in all cars for replacement either at the end of two years or at 30,000 miles, whichever comes first.

Driver Training

ONE of the chief management difficulties in training and supervising Wrigley fleet drivers comes from the fact that a representative naturally is not chosen primarily on the basis of his proved car driving and maintenance abilities. First of all, he must have the necessary qualifications in sales promotion, in personal appearance, sociability, and general reliability in the details of his servicing assignments. It is reported by Wrigley Co. fleet executives that there is an apparent high correlation between the personal qualities needed in a good company field representative and a man who also can become a good

(TURN TO NEXT PAGE, PLEASE)

Remote Control for Scattered Fleet

(CONTINUED FROM PAGE 157)

automobile operator.

Of course, such an applicant must have had some previous car-driving experience. Also, there is opportunity to check his driving habits during the two weeks of his initial training at a company regional headquarters and during the additional six weeks of his field training in his assigned territory by his Division Manager. Definite instructions also come to him in the form of letters from the Chicago General Offices.

"As a field representative of the Wm. Wrigley Jr. Company" he is told, "you will be furnished a Company-owned automobile. Because the car is owned by the Company, there are definite rules describing the authorized use you may make of the car . . . Upon receipt of this letter," he is further advised, "read it thoroughly and memorize the rules. Sign the original copy as an indication that you understand the rules and will be guided by them. Return the signed copy to this office for our files."

These instructions are:

"Rule No. 1—The car must be driven safely. This, no doubt, seems to be a very obvious rule, but the extent to which we apply it may not be quite so obvious. Of the several classes of traffic accidents that may involve a car, we consider you, the driver, responsible for all but two: The first is an accident which might involve your Company car when it is safely parked, and the second is an accident which might involve your Company car when it is legally stopped for stop signs, railroad tracks, etc. Bad weather, slippery roads, poor visibility, legal right of way, etc. are not acceptable reasons for accidents. The rule is: 'The car must be driven safely.' Whatever steps are necessary to accomplish this, you must take.

"Rule No. 2—No passengers are allowed in Company cars other than employees of the Wm. Wrigley Jr. Company. This is a hard, fast rule from which the Company will not waver.

"Rule No. 3—Your Company car shall be used only to carry on Company business.

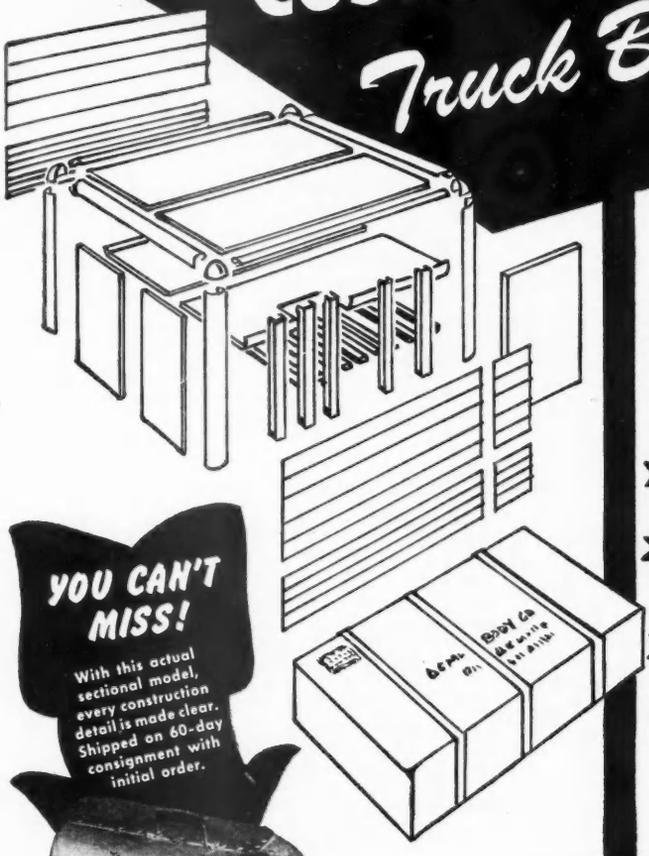
"Rule No. 4—Your Company car

(TURN TO PAGE 160, PLEASE)

BODY BUILDERS! TRUCK OPERATORS!

ALUMINUM BODY CORPORATION

New All-Aluminum "CUSTOM-BUILT" *Truck Body* *Kit*



AVAILABLE IN ANY— *LENGTH! WIDTH! HEIGHT!*

Aluminum Body Corporation, builders of "Custom-Built" truck and trailer bodies, present for the first time a completely "CUSTOM-BUILT BODY KIT!"

All materials necessary, right down to the last rivet, including aluminum armor plate floor and floor cross members, doors completely built ready for installation . . . every part tailored to your own individual specifications and needs.

ADVANTAGES TO YOU! For the first time, you can now equip your trucks or trailers with a body of any size. You can have any size doors...all the doors you need! Roof radius available in 3″ or 8″

A CINCH TO ASSEMBLE! Two men can set up the body from this precision-built custom kit. Full instructions and prints, plus a sectional model in miniature (see cut) show you the easy, step-by-step procedure and all construction details.

WHY HAUL DEAD WEIGHT! An aluminum body on your truck offers substantial weight savings, meaning more payload, less operating costs and longer equipment life! ALUMINUM WILL NOT RUST! ORIGINAL FINISH EASILY KEPT OR EASILY PAINTED.

Shipment Within 7 days from receipt of order under present market conditions. If you are not equipped to assemble bodies, have your local body builder contact us.

YOU CAN'T MISS!

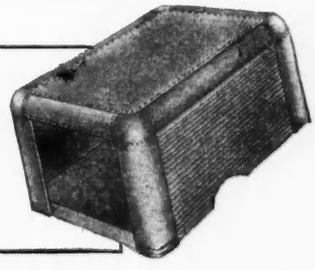
With this actual sectional model, every construction detail is made clear. Shipped on 60-day consignment with initial order.

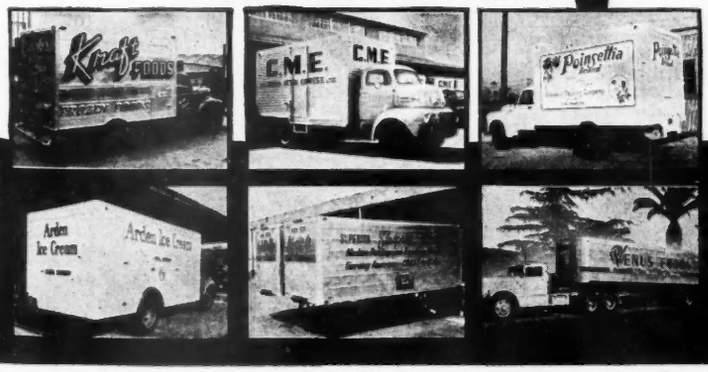
NOTE:
This advertisement is not intended to offer these kits for sale in a 300 mile radius of Los Angeles, Calif.

Typical Example of a CARGO VAN BODY

12′ long O. D.
7′ 6″ wide O. D.
7′ high inside

Price **$546.00**
F. O. B. Vernon 11, Calif.
Freight to Chicago $44.00.





WIRE OR WRITE SPECIFICATIONS FOR PRICES AND ADDITIONAL INFORMATION

ALUMINUM BODY CORPORATION
4601 S. Soto St. • Vernon 11, Calif.
Kimball 9623

Remote Control for Scattered Fleet

(CONTINUED FROM PAGE 158)

shall always be in your territory, as indicated by your itinerary, unless you have been authorized by responsible authority to drive it elsewhere.

"Rule No. 5—Your Company car is not to be driven week ends or holidays unless you are doing specially authorized work.

"The above five rules are considered so important that violation of any one rule is sufficient reason to discharge the representative who violates the rule."

The company car will normally be stored over Saturdays, Sundays, and holidays. A territory is so laid out that the representative usually will not be more than 300 to 500 miles distant from his home, and he will return every week or ten days. If within 50 miles from home at night on a week day or 100 miles on a week end, he usually will drive on home for the night.

A supplementary form letter from the Chicago general offices will remind him of his driving "good will" responsibilities.

"We would like to call your attention," the letter states, "to a matter which is not given much thought and may seem relatively unimportant.

"You men that have company-owned cars are instrumental in helping us maintain the good will that we now have. In other words while you are traveling in a company automobile, you represent part of the Wrigley organization, and want to take this opportunity to have you give some thought toward showing people every courtesy possible.

"Many times when you are apt to 'get even' with someone who has cut in on you or call some pedestrian down for doing something foolish, remember that you are liable to turn a customer away from our brands, and this in turn would react unfavorably on both the company and yourself.

"This subject may seem trivial, but the sum total of all the good will which can be built by our representatives in carefully driving company-owned cars is more than worth the effort. Give this some thought."

Safety Program

THE Wrigley Co. has always given a great deal of attention to driving safety. For 13 years the company has been enrolled in the National Safety Council and has been presenting NSC safety awards. Through these 13 years several Wrigley drivers have won continuous annual awards. In addition

(TURN TO PAGE 162, PLEASE)

Passing Every Test!

DITZLER Finishes must be extra good to pass so many severe tests. We submit them to critical and exhaustive examination in our own laboratories and in the field.

Our findings are then checked and double-checked by many of the country's motor car manufacturers. Their chemists and technicians test them on their own equipment and on the road to learn what effect sunlight, high humidity, salt spray, dust and extremes of heat and cold have on color retention and protective qualities of these quality coatings.

For nearly 50 years, such painstaking tests and the actual experience of car owners have demonstrated the *dependable performance* of Ditzler Finishes. That's why you'll find them being used by most of the builders of today's passenger cars, trucks and buses. There can be no stronger proof of the superiority of Ditzler Finishes for all refinishing needs.

Save Compounding and Polishing Time with DITZLER TWO-STAR** Materials

● Ditzler Two-Star** Lacquers, when thinned with Ditzler Two-Star** Thinner, DTL-113, flow on so smoothly that little compounding is required. Two-Star** Polishing Cleaner, DRX-4, gives a brilliant lustre. Use Two-Star** Polishing Compound, DRX-25, if color is sprayed a little dry, or overspray is rough. Two-Star** Gloss Undercoat, DL-900, eliminates sand scratches in old lacquers. You'll find these materials ideal for small touch-up spots in lacquer on baked enamel and deluxe items for all-over jobs in lacquer.

PITTSBURGH PLATE GLASS COMPANY

Remote Control for Scattered Fleet

(CONTINUED FROM PAGE 160)

practically all of the other Wrigley drivers have won at least a three-year safety award. Drivers are expected at all times to be "100 per cent lawful;" thus the company will not repay any part of a driver's fine for unlawful driving or parking. The company likewise has enough faith in their safe driving habits as not to carry collision insurance. They report few accidents that are serious enough to file as claims under deductible collision policies.

On the other hand if the company in its hiring may have misjudged a driver and if he does not respond to company safety regulations and training and proves to be definitely "accident prone," he may be dismissed. In cases where an older driver becomes "accident prone" before he has reached the pension age of 65 years, he may be transferred to work that does not require driving.

A fleet traffic accident is promptly reported by the representative. In general the company has found that such a report in a property damage case is sufficiently thorough not to make necessary an additional investigation by an insurance adjuster; however in a personal injury case the company gets reports from every available angle including doctor, hospital, police, and insurance agent.

One company method to keep a fleet driver alert in safe driving is to require a Weekly Safety Inspection Report (Fig. 1). Instructions at the bottom of the 5½ x 8½ in. report form which is used states that: "You are requested to spend one-half hour each week making the above inspection. We would suggest you complete this work just before putting the car away for the week end." This report requires a check on 15 different items as will be noted on the form.

This weekly safety inspection report by the driver is supplemented by a like report on exactly the same top 14 items which is made by the driver's Division Manager whenever he periodically contacts this driver which usually will be about once a month. The general offices are thus able to check regularly the weekly safety inspection reports submitted by the representative against the report submitted by the Division Manager.

The official importance of the driver's Weekly Safety Inspection Report is amplified by the fact that the other side of this same report sheet is used by the driver to submit his Weekly Car Expense Account (Fig. 2). The driver makes out his car expense report in triplicate, mailing in two of the copies. The last mark by the driver on his weekly safety inspection report will be either a "yes" or "no" after "Checked service record."

Service Record

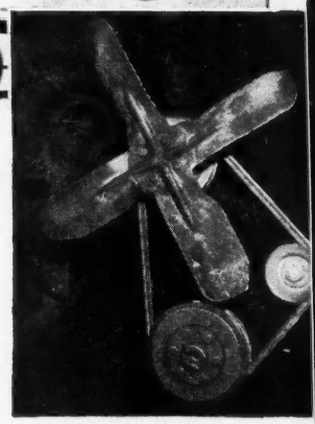
THE Wrigley "Service Record" is kept on a thin 8½ x 11 in. cardboard (Fig. 3). It will be noted that the card is ruled as a checking record for eight different scheduled operating and maintenance services to be made at spaced "speedometer readings" from 500 miles up to 39,000 miles. There are 44 scheduled servicings up to 25,000 miles, split at either 500-mile, 1000-mile, or 1500-mile intervals; and 67 servicings up to 39,000 miles.

(TURN TO PAGE 166, PLEASE)

. . is the ONE Belt that is

Specially Engineered for TRUCKS *and* BUSES

Records Show 50% to 80% Longer Life Than *Any Other Belt!*



The *written* statements of well-known Fleet Operators which appear on these two pages tell a story of real importance to every operator who cares about reducing his costs and increasing his profits.

Please note that these statements are all made by *practical* men—General Managers of Fleets—Purchasing Agents—Superintendents of Maintenance — men who know from *experience* just how important a good truck belt is in keeping trucks on schedule, in avoiding costly delays, in reducing operating costs —in getting the job done *on time* and *at a profit!*

These men know, as you do, that a truck belt is actually a most important part of the motor. No truck can run without a belt. And, while the belt's initial cost is small, it can cost a lot of dollars if at some critical moment it fails and holds the truck idle while a road-service call is made.

Saving Road Delays Pays Really Big Dividends

Please note also, that these operators tell not only of *cutting their belt costs actually in half*—or more—due to the much longer life of the Gates Truck Belt. They emphasize particularly the *even greater* savings this belt gives them by cutting down road delays and thus increasing priceless *operating time* — the only thing that pays them (or you) a profit.

We believe you will want to read every one of these statements. Surely they will convince you that you, too, can profit by using the one belt that is specially engineered for trucks and buses—the Gates Truck Belt.

Why Expect TRUCK BELT SERVICE from a Passenger Car Belt?

You wouldn't use a Passenger Car TIRE on a Truck. Why use a Passenger Car BELT?

The moment you think of it, you know that a typical truck belt must carry more than 3 times the horsepower load of a passenger car belt. Moreover, all the other strains and stresses—the hours of continuous operation—the speed of acceleration and deceleration—the starts, the stops—the idling in low gear—*all* are far greater in the case of Truck Belts. Isn't it only the part of wisdom, then, to use the belt that is *specially engineered* for this more demanding service—the GATES TRUCK BELT!

Gates

REG U S PAT OFF

The Mark of Specialized Research

THE GATES RUBBER COMPANY
DENVER, U. S. A.
"World's Largest Maker of V-Belts"

Gates Belt Jobbers in Every City Can Supply You Promptly

Remote Control for Scattered Fleet

(CONTINUED FROM PAGE 162)

Also the card specifically directs: "Transmission and differential—keep full. Do not refill without authorization." This "no refill" order has been one of the company's most debatable practices but has proved fully sound. It has been enforced for about seven years, excepting for some relaxations during the recent war period when it was necessary to run some cars up to four or five years, during which total period all cars had one or two grease refills. The company reasons that a new car, which is being operated only 1000 miles a month and a total of only 25,000 to 35,000 miles and which also is kept full of transmission and differential grease, normally should not need any complete grease change. As confirmation they state that they have never had a burned out transmission or rear end. This also means considerable cost saving, assuming that otherwise they probably would have been paying for one or two additional grease changes per car per year.

The company rule of "no grease refill without authorization" is supplemented by a like general order that all other types of car overhauls or replacement parts must receive advance authorization. That is, the driver must submit an itemized and signed estimate of all general repair requests. The company justifies this regulation on the principle that the plan not only protects the company but also protects the driver from being "oversold" on the overhaul needs of his car since the driver is not a skilled mechanic.

When such a request and estimate is received, the company will trim out all items of overhaul service or new parts which safely can be held off until the car is scheduled to be turned in. Many such estimates thus can be safely trimmed up to 50 per cent, and the average of such trims is perhaps 10 to 15 per cent. Items usually cut are: tightening body; replacing all spark plugs, versus only those found bad; general engine tune-up, versus checking proved faults in either ignition or fuel system, and it usually is not both. When a driver's report shows his car apparently not operating economically as to gas, a road test may be authorized. Usually, the only complete overhaul authorized on a car will be after an accident. All driver repair requests are given prompt attention and quickly authorized if definitely needed.

Of course it is necessary to keep a headquarters record of car expenses but in the case of the Wrigley Co. this has been simplified to the master control card shown in Fig. 4. Entries received from the Weekly Expense Account (Fig. 2) and any attachments thereto, are promptly transcribed to this master card.

Good Trade-In Value

IT is a company rule that the representative must always keep his car neat in appearance. He is authorized to have it washed every two weeks or oftener if driving conditions are unfavorable. To give color brightness all cars are simonized each spring.

When a car is scheduled for turn-in at 30,000 miles or after two years, the company asks the representative

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Remote Control for Scattered Fleet

(CONTINUED FROM PAGE 166)

to drive it in personally to the district company office to which he reports. This affords him a semi-vacation opportunity and helps to keep him in personal touch with management. He will drive the new car back to his territory.

The company has been encouraged by the fact that their old cars when turned in have always commanded a liberal credit rating. One of the assumed reasons, of course, is the fact of the lesser mileage on their cars as compared to the average industrial car of the same age. This favorable credit rating on old cars is accepted as evidence that their drivers on the average have developed good driving and maintenance practices.

Recent Wrigley service records indicate fleet gas mileage totals near to reported national averages. This is considered to be a favorable indication of Wrigley fleet policies due to the fact that Wrigley cars travel a low average mileage a month and because much of this travel is made up of short runs involving frequent starting and stopping in traffic.

In the total the Wrigley Co. feels that their management methods in the long-distant handling of their absentee motor fleet has been proving out very well. This conclusion, as stated, is based on their comparatively good gasoline mileage rates and also on their comparatively few road failures and serious accidents. This, undoubtedly, means that their drivers have been cooperating favorably in car maintenance responsibilities; thus helping the company to achieve safe and efficient vehicle operating methods.

END

(Please resume your reading P. 38)

Southern Comfort

In a lamplit cabin in the "Deep South," a man and his wife were earnestly discussing an important problem.

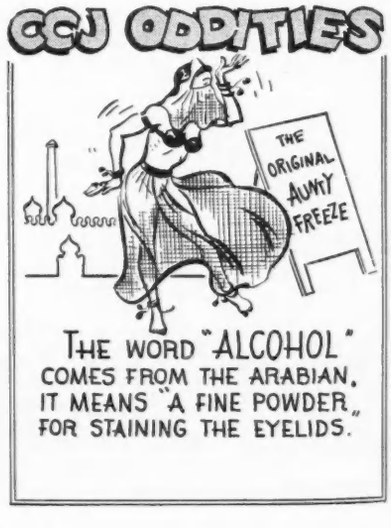
"Pap, you'll have to tell that boy of ourn purty soon."

"Is he askin' questions agin?"

"Yep, an' they git more an' more embarrassin' by th' hour. It's gittin' so ah don' know whut to say to him."

Pappy paced up and down, back and forth. His hands were tightly clasped behind his back. A frown cut deep furrows in his brow.

"Fer a long time ah've feered this," he finally said. "Ah guess ah'll have to talk with him in th' mornin'. We caint let him grow up igorant." He sighed. "Ah'll have to tell him it's a fact . . . there is a No'th."



Cold Bending

(CONTINUED FROM PAGE 40)

production basis made it possible to dispense with a blacksmith shop, the blacksmith's coal-burning forge, the services of a blacksmith and a blacksmith's helper. Fabrication of body irons and all other products by forge, anvil and hammer has been abandoned.

Besides gaining in efficiency and lower costs, the department also gained in cleanliness since the nature of a blacksmith shop is contrary to good housekeeping in a good automotive maintenance shop.

When heat is needed the shop now uses carbon arc equipment. Although heat is not used on any of the products now in production, it is a fact that even a small amount of heat often helps to make sharp bends possible without rupturing the steel.

Of course the press operations go beyond those shown in the illustrations. During the war, for instance, the Department was unable to get a replacement part for kerosene burner equipment used on asphalt tanks. Unless this part could be made some of the burners would have to be taken out of operation and road repairs would suffer.

Dies were made to construct these parts which were of thin metal. After a few had been made the shop started making them for all the divisions in the state. Bad burners were shipped into headquarters and newly repaired burners were sent back.

Here again the state received an extra dividend. They made the replacement part out of stainless steel and found that it lasted some one hundred times longer than the commercially made part.

Another job in regular production at the headquarters shop is a 4 x 4 in. stirrup strap for stake bodies. These trucks do a hard job under all kinds of conditions and stake stirrups are frequently broken and need replacing. Made more substantial they now last longer.

The hydraulic press can also be regarded as a huge vise with plenty of room. They had a job involving the welding of a short piece of round stock to a flat piece of steel, which needed to be finished exactly square. Being light the pieces sometimes moved while being welded. To remedy this they merely locked the two pieces in the hydraulic press and welded the stub to the flat while so locked—a perfect job.

In the matter of dies, most of them are made in the machine shop where they have lathes, drill presses, shapers, planers and surface grinders. Dies are usually made out of scrap.

On dies that have a tendency to cause the work to stick in production, they use a light coating of common lard oil.

END

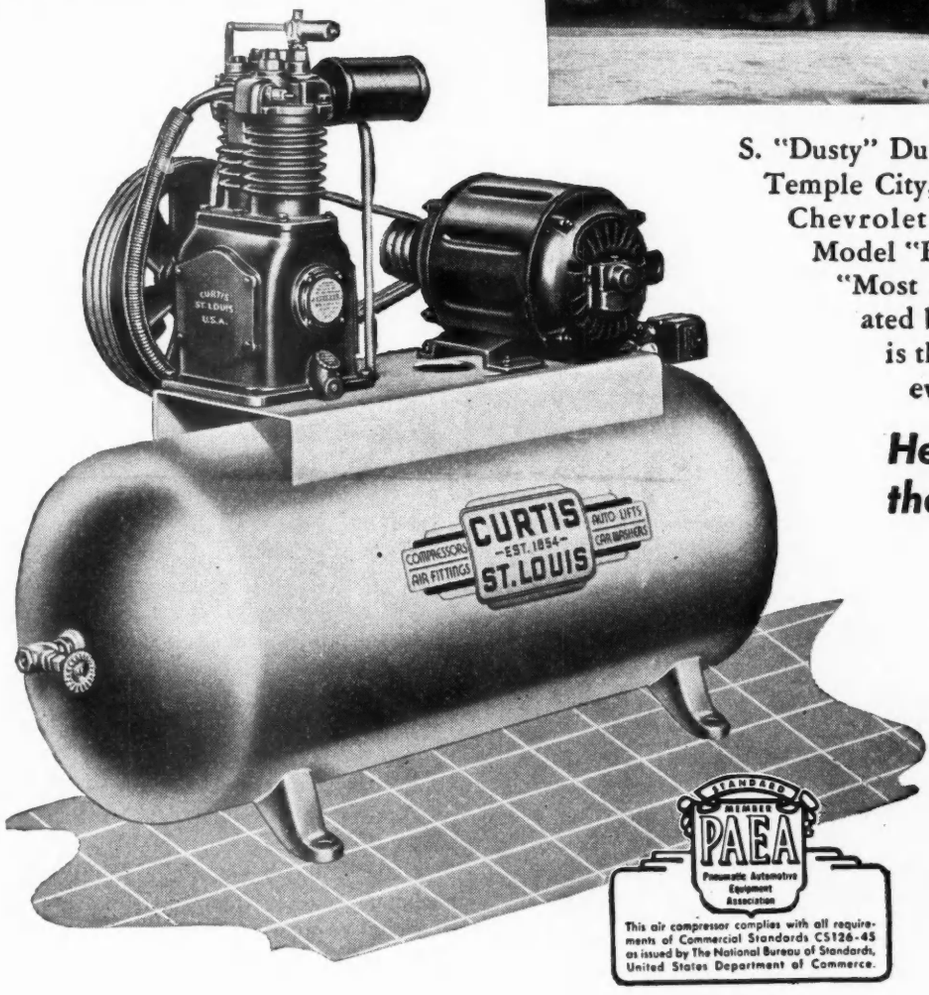
(Please resume your reading on P. 41)

Low Pressure Is Critical

Tire companies have issued a warning that tire inflation is more important with the new low pressure tires than with ordinary tires. They are urging that tires be checked oftener since the low pressure tires will wear faster and, on front wheels, more irregularly than standard pressure tires if the pressure is allowed to drop below the recommended 24 pound level.

Our CURTIS AIR COMPRESSOR

"Most Efficient Ever Experienced"

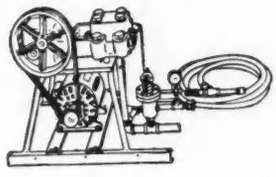


S. "Dusty" Dustman, Service Manager of Temple City, Calif., branch of Mission Chevrolet Co., says of their Curtis Model "F" 2-stage Air Compressor, "Most of our equipment is operated by air and this Compressor is the most efficient that I have ever experienced."

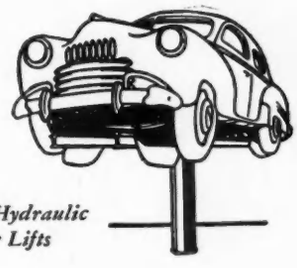
Here are Some of the reasons:

- Precision construction throughout
- Timken Bearings
- Self-Oiling
- Centrifugal unloader gives positive unloaded starting
- Enclosed design
- Slow speed
- Finned copper intercooler
- High and low level oil gauge
- Fan flywheel
- Tank-deep penetrating welds—A.S.M.E.

Write for Bulletin C-6 on Curtis Air Compressors, Auto Lifts and Hydraulic Car Washers.



Curtis Hydraulic Car Washers



Curtis Hydraulic Car Lifts

C-611A

CURTIS

PNEUMATIC MACHINERY DIVISION
of Curtis Manufacturing Company
1970 Kienlen Avenue • St. Louis 20, Mo.

94 Years of Precision Manufacturing

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1970 Kienlen Avenue, St. Louis 20, Missouri

Please send me your literature Kit C-6, which includes bulletins on Curtis Air Compressors, Curtis Auto Lifts and Curtis Car Washers.

Name.....
Firm.....
Street.....
City.....*Zone*.....*State*.....

Road Builders

(CONTINUED FROM PAGE 77)

of financial ability. However, a number of the state surveys do include broad long-range programs for federal, state, local and municipal roads. California and Michigan have completed such program plans. Oregon and Washington, as other examples, are making such surveys. Many counties now are becoming "standard conscious" as to their roads, even though not able immediately to adopt standards.

Rural Roads Still Poor

B. A. WINQUEST, president of the National Rural Letter Carriers Assn., emphasized the highway needs of farmers. "They own 1,110,000 trucks," said he, "and in addition hire another half million to handle farm products and supplies. Thirty-four per cent of all trucks are used in agriculture. Seventy-eight per cent of the farmer's travel is connected with his work and can be classified as essential."

He stated that 1,400,000 miles of the total of more than 2,400,000 miles of the classified "rural roads" of the nation are still unsurfaced dirt roads impassable during a part of each year; but farmers still must depend on such highways for getting produce to market, delivery of mail, and for school bus transportation. These dirt roads are of especial concern to the 32,000 rural letter carriers who daily serve nearly 30,000,000 individual members, or about one-fourth of the national population.

Need For Truck Terminals

ONE of the ARBA committees gave special attention to the design of highways as related to the location and accessibility of "terminals". Two of the eight units of this report were "truck terminals" and "truck transfers." It was stated that "many cities have numerous truck terminals which add greatly to traffic congestion. Trucks in many cases, discharge their merchandise while standing at right angles to the curb. This method of delivery often restricts the thoroughfare to one-half or one-third its normal width and thereby causes frequent and undesirable traffic delays."

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Road Builders

(CONTINUED FROM PAGE 222)

Cost Per-Ton-Mile Study

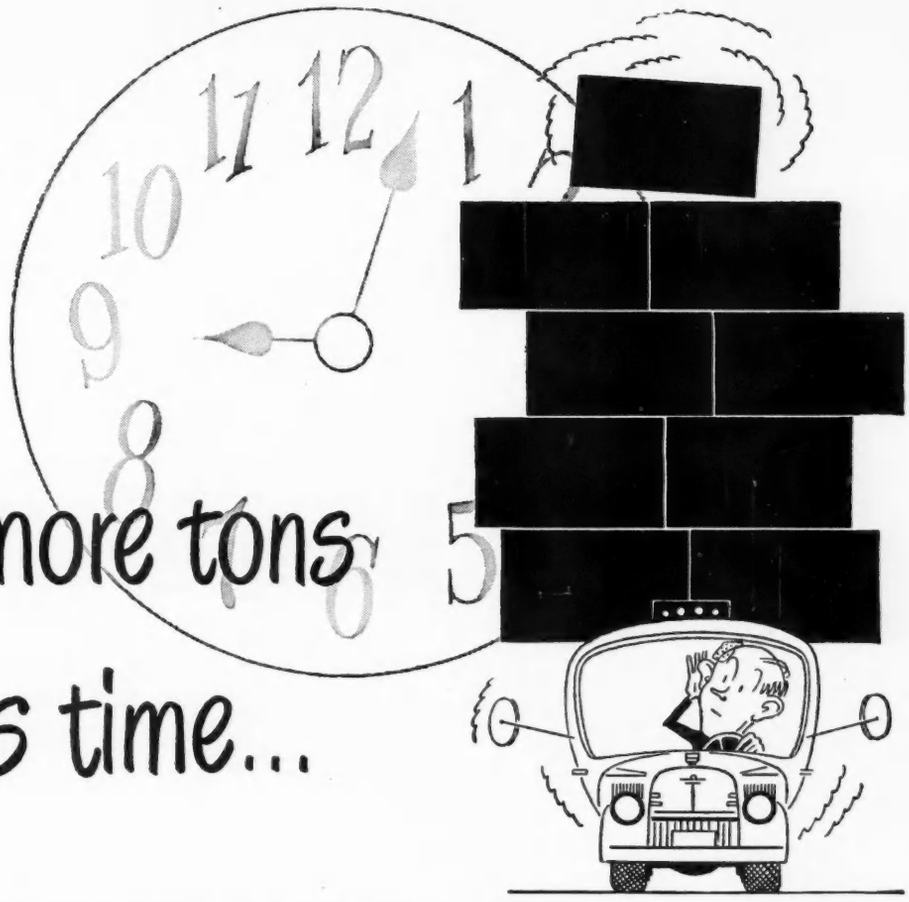
THE ARBA Committee on Gross Weights on Highways made mention of the studies of "heavy motor vehicle operation" now under way on the Pennsylvania Turnpike and on sections of the Lincoln Highway, but it may be many months before study results are announced. These studies are "to determine the cost per-ton-mile in hauling loads of various sizes, by trucks over a highway of modern design as well as over a route of low standards of design typical of the large mileage now in use."

The report also mentions, that the weight problem is of vital importance to the highway movement of heavy road building equipment. It was explained that "if the contractors cannot move the equipment over the highways and structures, then there must be provisions made for quick and economical disassembling and reassembling of the equipment. The report emphasized that these authorizations did not include the consideration of special-permit, heavy equipment movements that are not eligible for licensed loads. The report argues that "by using escorts, one-way traffic on structures, certain days of the week, and daylight hours for movements, it should be possible to move gross loads of approximately 125,000 pounds." It was urged that "immediate steps be taken, so the various states will not arbitrarily set a gross limit which would seriously handicap the movement of equipment by special permits."

Special Highway Maintenance

THE new ARBA Committee on Maintenance reported to the Convention that it is endeavoring to promote the acceptance of two precepts of road maintenance. First, the Committee thinks the public should be educated about the added highway maintenance costs that come from the special services which are being demanded; such as snow plowing, ice control, weed and brush control, pavement marking, etc. These "special services" add nothing to the basic road structure, but that they are considered necessary to the safety and economy of any state which relies on

(TURN TO PAGE 226, PLEASE)



Hauling more tons in less time...

WITH CURVED WINDSHIELDS, WIDE, CLEAR WINDOWS

● Your drivers can trim travel time between terminals when they enjoy a clear, unobstructed view of the entire road.

They get that full vision through curved Safety Glass windshields, first mass-produced by Pittsburgh Plate Glass Company, and through the same company's wide, clear, Safety Glass cab windows. Consequently they suffer less nerve strain, less eye fatigue, less road weariness. That means fewer rest stops, fewer costly mishaps and delays.

Be sure you get Safety Glasses whose high quality and satisfactory service are guaranteed by the Pittsburgh trade-mark. Back of it stand unequalled research and manufacturing equipment and long years of glass-making experience. We invite you to call on a near-by member of our nation-wide system of branches and dealers when you need Safety Glass. Each piece of glass he offers bears the "Pittsburgh" trade-mark. Pittsburgh Plate Glass Company, 2305-8 Grant Building, Pittsburgh 19, Pennsylvania.

Safety Glass BY "PITTSBURGH"

DUPLATE SAFETY PLATE GLASS • DUOLITE SAFETY WINDOW GLASS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

Road Builders

(CONTINUED FROM PAGE 224)

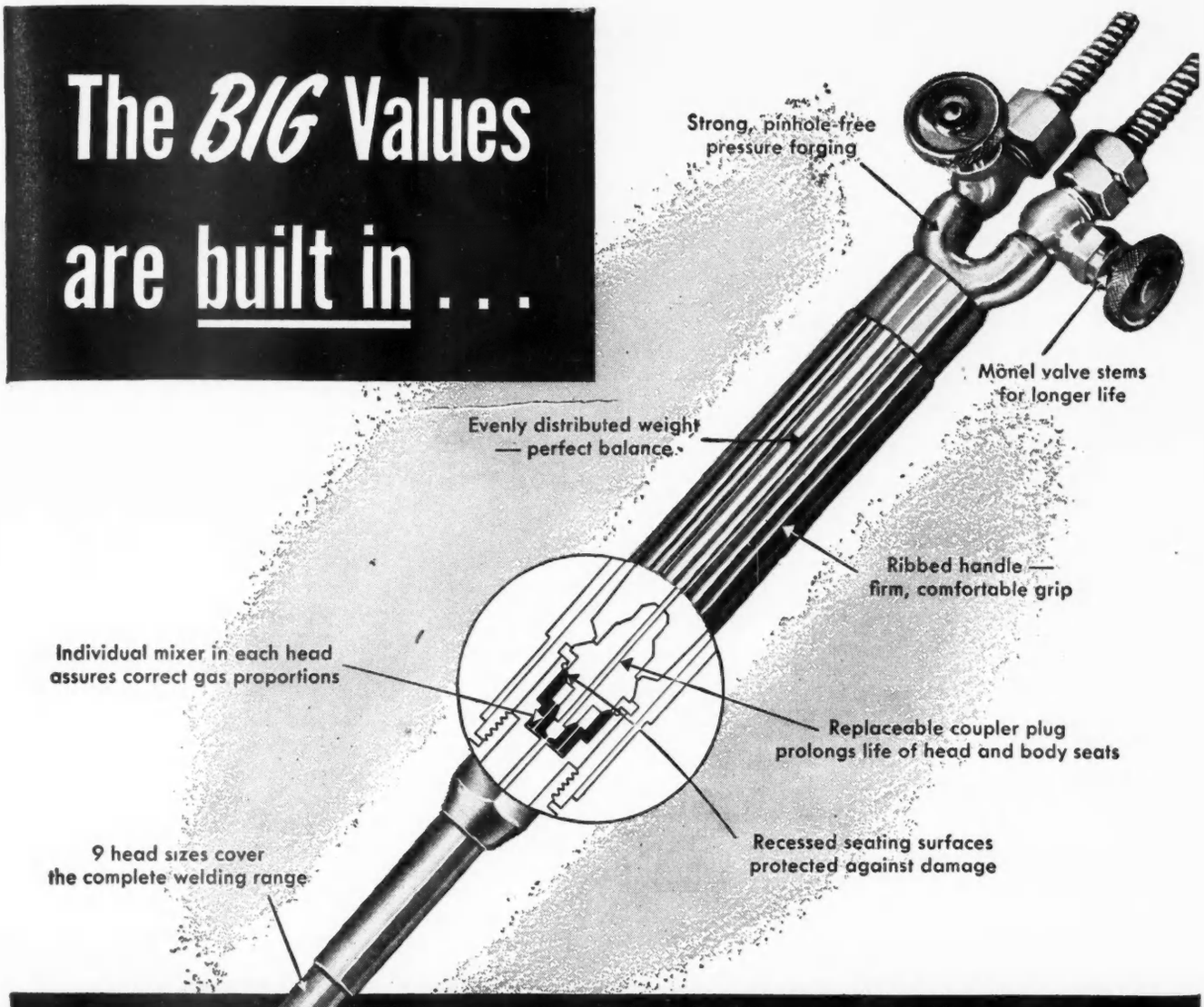
highway transport for food, industry and educational services. They require special equipment and manpower and are mostly seasonal services. The committee maintains that the public should be kept aware that these are extra services, and not chargeable directly against basic highway maintenance costs.

Second, the ARBA Maintenance Committee thinks that steps should be taken to make generally available to all the states the methods in road maintenance through the use of special equipment that have been proving useful in any one section. Examples are the more general use of underbody truck scrapers for snow removal, motorized weed control practices, etc.

In the reports to the convention of the Committee on Highway Location, Surveying and Mapping, which included a number of subcommittee reports, the problems relating to trucking especially were emphasized.

(TURN TO PAGE 228, PLEASE)

The *BIG* Values are built in . . .



ALL-PURPOSE WELDING BLOWPIPE — No. 35

ORDER FROM YOUR

PUROX

Trade-Mark

JOBBER

Or write us for free folder and jobber's name. Address: The Linde Air Products Company, Room 308, 30 E. 42nd St., New York 17, N. Y.

The PUROX No. 35 Blowpipe covers a complete welding range, from 28-gage sheet to plate over 1 inch thick. An all-purpose blowpipe — *with special capacity for continuous heavy work* — it is first choice of experienced operators who *know* welding and cutting equipment.

PUROX blowpipes are products of The Linde Air Products Company, a Unit of Union Carbide and Carbon Corporation. You can rely on them for long, dependable service under *any* operating conditions. Their efficient design and high standards of workmanship are based on LINDE's skill and practical experience in the oxy-acetylene field.

No. 35 Blowpipe with 5 Heads.....$34.50

(Also available in 6 standard outfits, $82.00 to $131.50.)

The terms "Linde" and "Purox" are trade-marks of Union Carbide and Carbon Corporation or its Units.

Road Builders

(CONTINUED FROM PAGE 226)

Truck Traffic Gains Most

"TRUCK traffic on the Nation's highways," stated C. J. Fuller, Chief Locating Engineer, Kentucky Dept. of Highways, in the report of the Subcommittee on Grading, "is increasing more rapidly than any other type of highway transportation. Registration rose approximately 35 per cent from 1941 to 1947. The average load increased 37 per cent in the same period. This increase in truck traffic will play an important part in future highway location. Emphasis will have to be placed on the problem of curvature and grades in order to provide faster means of transportation. . . .

"A large percentage of the roads on our present highway systems are inadequate due to poor alignment, heavy grades and sub-standard horizontal and vertical sight distances. Highway systems will have to be redesigned due to the increase in traffic which calls for wider pavement width, lighter grades and longer sight distances. Traffic congestion resulting from slow-moving vehicles on grades constitute a problem for the State Highway Department. . . .

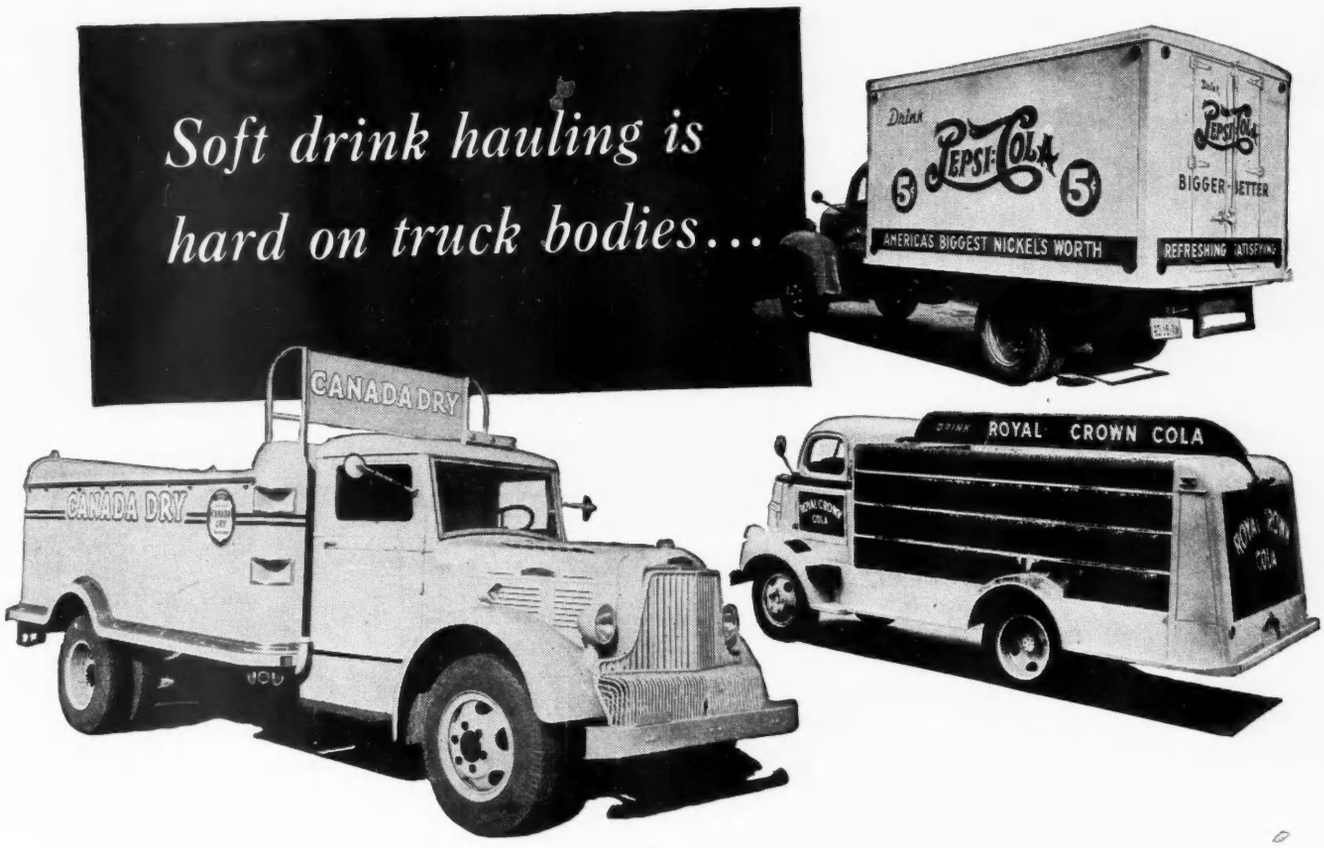
Proper Planning A Must

"HIGHWAY planning has indicated that the so-called permanent type of highway construction may be expected to give satisfactory service of 20 years. After 20 years it should either be reconstructed so as to be able to carry larger amounts of traffic more easily or undergo a major repair in order to protect the existing pavement from deterioration."

Frank E. Ester, Engineer of road Location, Indiana State Highway Commission, in the report of his subcommittee on Design, emphasized another angle of the highway problem. "The location and design of highways," said he, "is a phrase of six simple words but they cover a field of highway economy so great that scarcely a person in the United States is not directly affected by it."

As he sees it, a properly located, designed, and constructed highway can be accomplished "only if the following schedule of information is available and put into its proper use at the time the location survey is made."

(TURN TO PAGE 230, PLEASE)



...that's why it pays to build them light—but rugged—with U·S·S COR-TEN

LIGHT weight is important in botlers' trucks, because every unnecessary pound you haul costs money. But equally important are strength and stamina because these bodies really take a beating.

By using U·S·S COR-TEN the builders of the hard-working equipment shown here have attained the highly desirable combination of maximum durability, maximum capacity, minimum weight and minimum cost.

By using COR-TEN which has a yield point of 50,000 psi. (1½ times higher than plain carbon steel) they get added strength and sturdiness even when they reduce sections to save weight. With COR-TEN's greater impact strength and greater resistance to abrasion they give their units amazing ability to resist hard knocks and rough usage. And road shock and vibration stresses, that play hob with ordinary bodies in heavy-duty service, are safely absorbed because COR-TEN has high fatigue strength—60% greater than plain steel.

"COR-TEN-built" equipment like this, reduces operating costs because it can carry bigger loads and it drags around no useless deadweight. It costs less for maintenance and repairs because it has great endurance and high resistance to atmospheric corrosion. It pays bigger dividends on the investment because COR-TEN, unlike aluminum and magnesium, is inexpensive. Actually COR-TEN today costs so very little more than plain carbon steel that in some equipment it will reduce weight with no increase in cost whatever.

If you want to know how U·S·S COR-TEN can be applied to reduce weight, to add strength and prolong life in your transporation units, write us. Our engineers have had 13 years' experience applying this pioneer high strength steel to trucks and trailers of every kind. They'll be glad to show you how to use it to get optimum results at little or no added cost.

AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO
CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST
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U·S·S HIGH STRENGTH STEELS

U·S·S COR-TEN · U·S·S MAN-TEN · U·S·S ABRASION RESISTING · U·S·S MANGANESE-NICKEL-COPPER

8-1085

UNITED STATES STEEL

Road Builders

(CONTINUED FROM PAGE 228)

1. Traffic information. . . . To include flow maps, to show the hourly volume counts and other information regarding existing traffic volumes, such as commercial and passenger car percentages. Origin-destination and speed and delay studies.

2. Planning information. . . . To include expected traffic load within the life time of the proposed designed highway. Importance of the highway itself relative to the future developments of any highway system or systems.

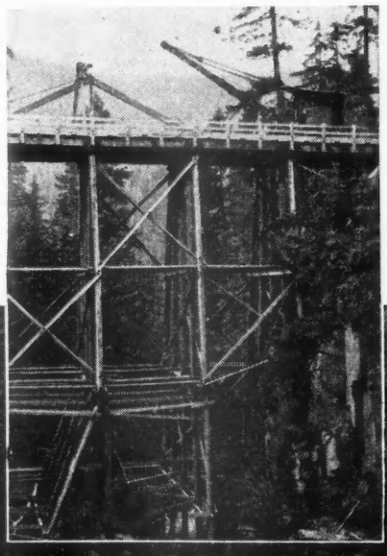
3. Design information. . . . To include design standard required to fulfill the conditions listed above. Rights of way required. Design of policies currently in use.

"It is only within the past ten years," he reports, "that accurate traffic information to any great extent has been available to engineers of location and design. Highways were located, designed and constructed with little thought to future traffic needs or the desires of the travelling public. Some engineers attempted to estimate the traffic burden a highway would be required to carry, but their estimates were in general little more than guesses based on past experiences. The result of such practices was the under or over designing of many highways which in either case was expensive to the taxpayer and gave the engineer a lack of confidence in his decisions.

"With the advent of the automatic traffic counter and the establishing in the various states of the Highway Planning Surveys organizations, a wealth of data was made available that heretofore has been guess-work."

END

(Please resume your reading on P. 78)



Bridging the gap with WAUKESHA power

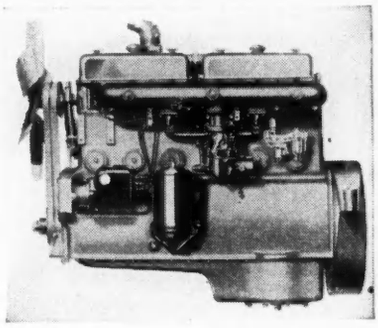
WAUKESHA ENGINES

● In the great Northwest, road building contractors cross their bridges when they come to canyons that need them—building the bridges right then and there, with Waukesha powered equipment.

Here a huge crane is setting the center truss of a high bridge for a logging road. The crane makers, Skagit Iron Works of Sedro-Woolley, Wash., well-known manufacturers of heavy-duty logging machinery, powered this 10-ton truck-bridge crane with a 140-GK Waukesha Engine.

When it comes to rough, tough jobs this engine has the build to take on all comers. All its wearing parts are precision built for quick, easy replacement. It's an engine the major parts of which can be completely renewed not just overhauled. Crankcase and cylinder frame in one unit. Removable wet type cylinder sleeves. Forged steel crankshaft. Seven 3¼ inch main bearings. Full pressure oiling. Waukesha centrifugal governor, enclosed, self-lubricated and non-hunting.

MODEL 140-GK
6 cylinders, 4½ in. bore x 5½ in. stroke, 525 cu. in. displ. Max. hp. 142 at 2200 rpm on gasoline.



Get Bulletin 1161. Ask Waukesha engineers to bridge your power difficulties.

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS. • NEW YORK • TULSA • LOS ANGELES

Truck Reefer

(CONTINUED FROM PAGE 105)

both low and high temperature applications in all sizes of trucks and semi-trailers.

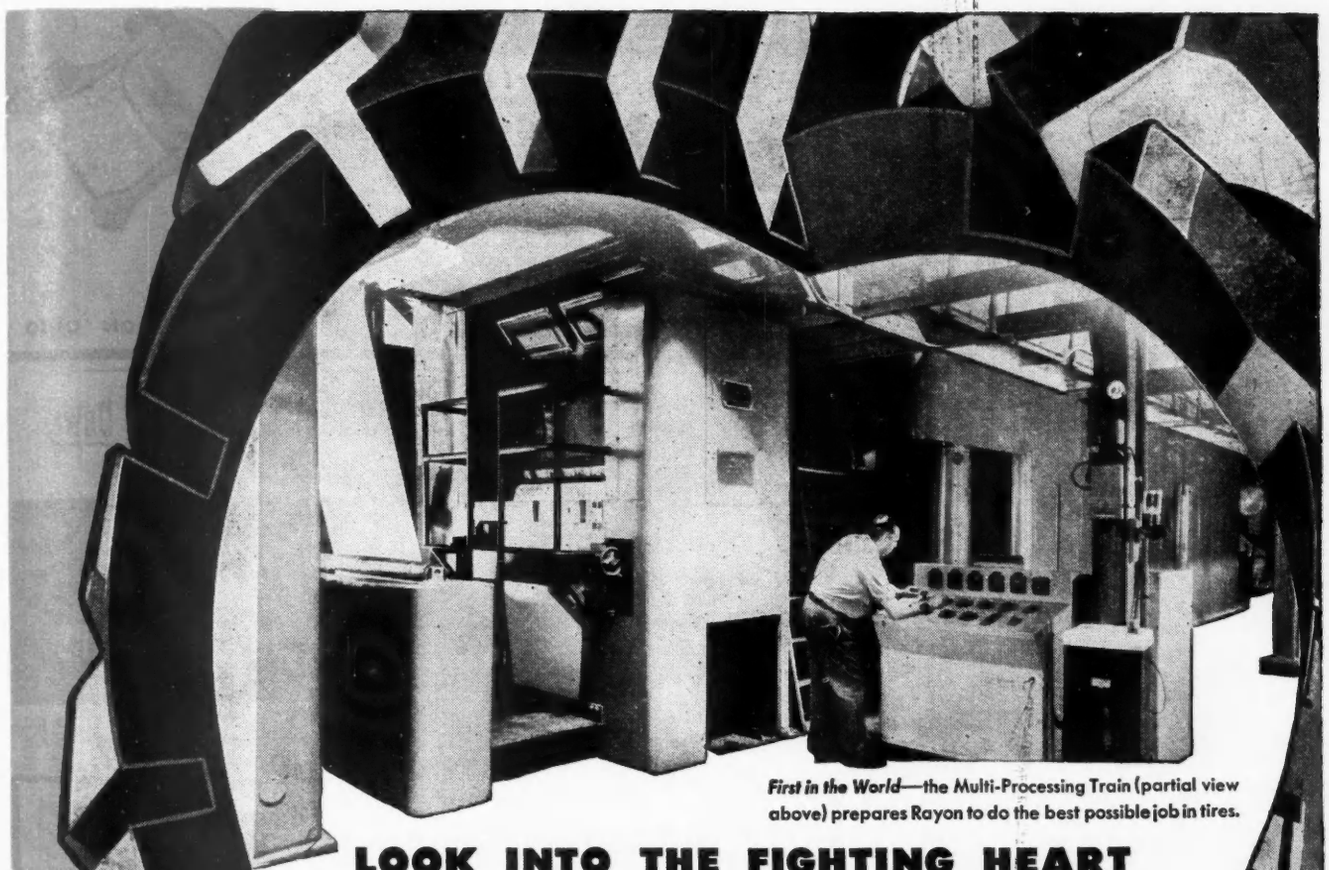
On sizes above 1 hp, the special generator is operated through a power take-off from the truck or tractor transmission instead of off the fan belt. On sizes above ½ hp a combination 6 and 12-volt system is employed.

To place the unit in operation it is necessary to start the truck engine and flip a toggle switch on the dashboard. A conventional thermostatic control is employed to control the operation of the refrigerating unit. On high temperature applications (above 32 degrees) defrosting is automatic after each "on" cycle.

Accessory equipment to be made available includes a kit which permits plugging in the refrigeration unit to standard 110-volt a.c. current for standby or overnight refrigeration requirements. This would make it unnecessary to unload the truck at the end of the day's run.

A typical installation in a small panel truck mounts the condensing unit conveniently on the floor of the cab beside the driver. Where a custom-built insulated body on a cab and chassis is used, the condensing unit may be suspended beneath the body on one side of the truck. The same method could be used on semi-trailers, or the unit could be mounted in the nose of the trailer.

Refrigerant lines between the condensing unit and the unit cooler are flexible and are fitted with self-sealing couplings, making for quick substitution of a replacement condensing unit. Conventional refrigeration equipment is used throughout, the only major change being the use of 6-volt motors to drive the condensing unit and the unit cooler fan, plus some reinforcement to withstand road shock.



First in the World—the Multi-Processing Train (partial view above) prepares Rayon to do the best possible job in tires.

LOOK INTO THE FIGHTING HEART OF A *THOROBRED* by DAYTON

This Multi-Processing Train prepares the Rayon Cord which goes into the Fighting Heart of a Thorobred by Dayton. This Rayon is dipped, stretched, impregnated and coated in one continuous high-speed operation. The strength and elongation of every Rayon Cord are under precision electronic control at every step.

The result? Better tire performance in your trucking operations.

Put them on trial. Test Thorobreds on a tough run. Ask your bookkeeper how they're doing. You'll learn how Thorobreds by Dayton cut tire costs.

Tires by Dayton

Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

CCJ Newscast

(CONTINUED FROM PAGE 114)

BRAKE SERVICE FILM

A graphic and practical film for truck service men and dealers has been prepared by The New York Air Brake Co. featuring the installation and servicing of Hycon Compound Hydraulic Cylinders for commercial vehicles.

CONFERENCE CORNER NOTE

In the June Conference Corner discussion of reverse flushing cooling systems two titles and authors were transposed. The subject, "Cleaners Should Be Used With A Flush" should have carried the by-line of R. D. Williams, of Specialties Div., Commercial Solvents Corp. The subject of "Reverse Flushing Alone Is Not Necessary" should have been attributed to F. R. Archibald, of National Carbon Co., Inc.

NOTE ON PRIZE WINNING HINT

The Ventalarm Signal referred to in the prize winning shop hint for June, Page 44 is a registered trade mark and applicable only to a product of The Skully Signal Co., Cambridge, Mass.

Industrial Notes

Cummins Engine Company, Inc., Columbus, Ind. has acquired the Omaha, Nebr., Cummins dealership, formerly operated by Interstate Machinery and Supply Co.

The American Bantam Car Co., manufacturer of supercargo truck trailers, has acquired the Newgren Co. of Toledo, O., farm implement subsidiary of the Monroe Auto Equipment Co. of Monroe, Mich.

The stockholders and directors of Bantam who authorized the purchase, elected Brouwer D. McIntyre, of the Monroe Co., as their new board chairman and company president. John P. Painter, of Detroit, was elected vice-president and appointed general manager of all company operations.

Bantam will continue to manufacture truck trailers, and use excess plant facilities available since the end of the war to fabricate Newgren products which Newgren will distribute nationally.

The Trailmobile Co. has announced the opening of a new factory branch at 770

(TURN TO PAGE 236, PLEASE)

CCJ Newscast

(CONTINUED FROM PAGE 234)

W. Ashland, N. E., Atlanta, Ga. The branch will be under the managership of L. C. Doss. Ralph H. Cannon and Edward L. Steinhauer have been appointed sales representatives.

The Fruehauf Trailer Co. is now employing the services of a consultant tank specialist at each of their 20 sales zones. A specialist will be available to field salesmen to help select the right tank in the right capacity for the job that is to be done.

A new separate truck sales and service establishment has been opened in Grand Forks, N. D. by Forx Motor Sales, Inc., Ford dealers.

To provide an adequate supply of parts and increasingly better service for Fuller transmissions operated in the western United States, the Fuller Mfg. Co., Kalamazoo, Mich., has established a wholesale factory branch at 1060 East 11th Street, Oakland, Cal. E. L. King, western district manager, is in charge of the branch.

A warehouse stock of Rowland Coil Springs and Coil Suspension Parts has been set up at Universal Joint Service, Inc., 220 West 68th St., New York, under the management of Bill Gray.

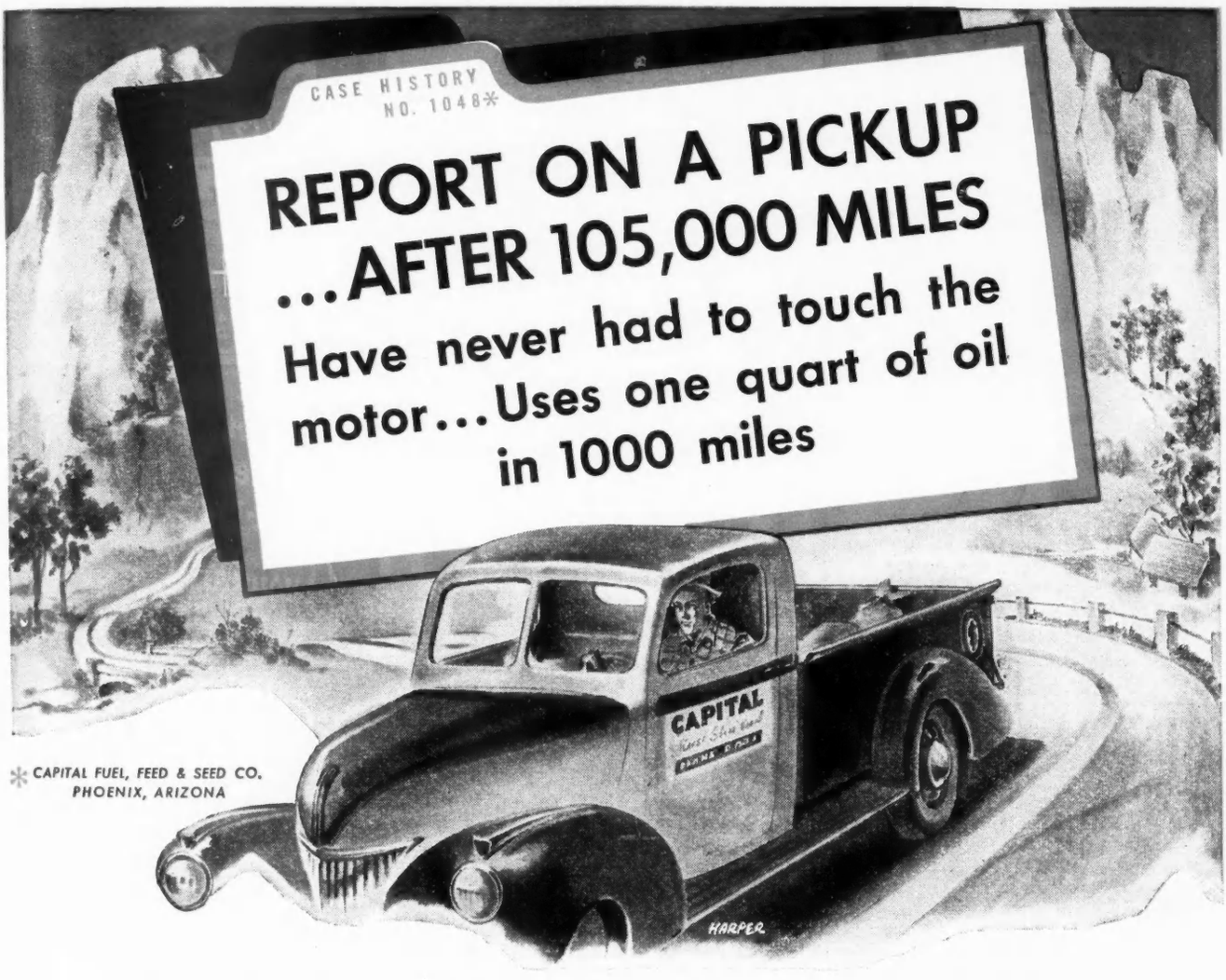
A new, multi-million dollar research center which will "make it possible to bring scientific discoveries to maturity three or four times faster than at present" was inaugurated in Brecksville, O. by The B. F. Goodrich Co. on June 15. The six buildings on the 261-acre site are all equipped with the latest scientific tools and equipment. In addition to probing into the mysteries of crude and man-made rubber, BFG will conduct intensive research in such fields as chemicals, plastics, agriculture, horticulture and the application of nuclear energy to rubber manufacturing. Atomic energy's usefulness and effects in rubber and related materials will be studied in one of the center's laboratories.

Tire price increases of between 4½ and 7½ per cent were announced July 7 by Seiberling Rubber Co., which said the increases were made necessary by higher labor and materials costs.

All passenger tires except the popular 6.00-16 size went up 6 per cent. The 6.00-16 size was up 4.6 per cent. Truck tires were increased 5 per cent, as were all inner tubes.

A 40 per cent increase in current facili-

(TURN TO PAGE 238, PLEASE)



* CAPITAL FUEL, FEED & SEED CO.
PHOENIX, ARIZONA

This pickup truck has seen plenty of hard driving. For two and a half years it ran from sea level to an altitude of 8000 feet on every single trip it made. For the first 30,000 miles the oil was changed every 2000 miles. Since then it has been on a strict 1000-mile basis. There never has been any need to work on the motor . . . and the truck is in excellent condition.

The owner of this truck is so satisfied with the performance of Wolf's Head Heavy Duty Oil that for the past three years he has used Wolf's Head in every piece of equipment he has . . . including passenger cars, 1½- and 2-ton trucks, 3-ton Semis and two 150 H.P. Diesel transports.

Such performance can be expected by every fleet owner who uses Wolf's Head . . . and who follows the sound operational and maintenance practices of the Wolf's Head Laboratory Control Service Plan. This plan . . . offered free of charge to fleet operators . . . reduces maintenance and operating costs; cuts down lay-ups for service and repairs; conserves the life and increases the efficiency of each individual unit of a fleet. Wolf's Head Oil Refining Co., Inc., Oil City, Pa., New York 10, N. Y.

WOLF'S HEAD

MOTOR OIL AND LUBES

100% Pure Pennsylvania —"Premium Grade"

P.G.C.O.A. Permit No. 6

Use postage-paid card inserted at page 57 for free information on advertised products

CCJ Newscast

(CONTINUED FROM PAGE 236)

ties at The Texas Co.'s research laboratories in Beacon, N. Y., will be provided by the construction of three new buildings at that location.

A proposal to sell the Los Angeles-Denver trucking franchises of West Coast Fast Freight to Watson Bros. Transportation Co. has been revealed in a joint announcement by B. M. Stewart, president of West Coast, and William M. Wolfe, vice-president of Watson Bros. A petition for authority to consummate the sale has been filed with the Interstate Commerce Commission in Washington.

As part of the sale, Watson Bros., will acquire the seller's terminal and real estate properties in Denver. The deal, involving a consideration of over $600,000 and 2500 miles of regular and alternate highway routes, will give Los Angeles direct through truck service to most of the principle mid-western cities including Minneapolis, Chicago, Omaha, Kansas City and St. Louis. Watson's westernmost terminal is now at Denver.

Pennsylvania Rubber Co., Jeannette, Pa., has added an entirely new range of lower priced tires to its line.

The Keystone Deluxe, features a modern seven-rib tread design.

The Pennsylvania Rubber Co. recently made effective an unconditional road hazard guarantee for all times. Under the arrangement, Pennsylvania passenger tires are guaranteed from nine to 18 months. Truck tires are guaranteed against hazards for six months and tractor tires for 24 months.

United States Rubber Co. increased tire prices on July 1.

Passenger tires were increased by approximately 6 per cent and truck tires by 5 per cent.

The town of McCook, Ill., has been chosen as the site of the new, modern plant of Turco Products, Inc., manufacturers of specialized industrial cleaning compounds.

END

(Please resume your reading on P. 116)

Classified Advertisement

MOVING - TRUCKING - STORAGE - INDIANA National affiliations; three trucks-trailors; pick-up; two fire-proof buildings 20,000 square feet; modern-equipped; excellent condition; same owner 36 years; retiring. Sell with property. Price reasonable.
APPLE COMPANY, BROKERS, CLEVELAND, OHIO

Willard

Dependability and Performance Mean

QUICK STARTS
LONG LIFE
LOW COST PER MILE

Willard Heavy Duty Transport Batteries

Designed particularly to withstand severe vibration and cycling service in commercial applications. Heavy plates. Sturdy hard rubber containers. Willard Safety-Fill Construction. Willard Rubber Insulation and glass fibre retaining mats for severe high mileage service. Selected wood separators and glass fibre retaining mats for normal service.

WILLARD STORAGE BATTERY COMPANY

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AT CONCRETE MIXING PLANTS

FWD TRUCKS DO MORE WORK

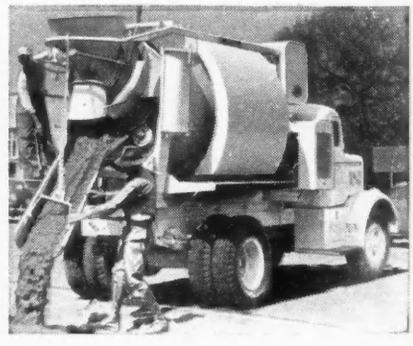
MOVE SWIFTLY TO POURING POINTS

At concrete plants, your hauling of cement, sand, gravel must be done fast, at low cost, to keep all operations profitably coordinated. Your mobile mixers must get through to the pouring points without delay, on or off the highway.

In these operations, FWD trucks, with four-wheel-drive power and traction, will prove their superior "going power", getting through to construction sites often inaccessible to ordinary trucks — keeping the concrete moving at a rate that saves time and makes money for you.

To speed up your concrete operations — to do more work profitably — put your mixers on FWD four-wheel-drive trucks.

See your nearest FWD distributor or write for complete information.



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THE FOUR WHEEL DRIVE AUTO CO., Clintonville, Wisconsin

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WORLD-WIDE SALES and SERVICE

America's Foremost Heavy-Duty Truck